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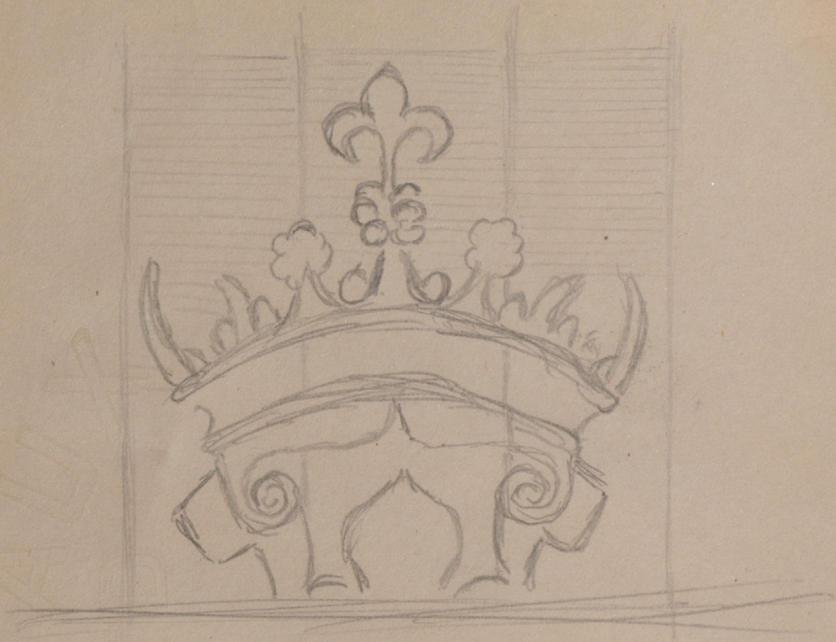

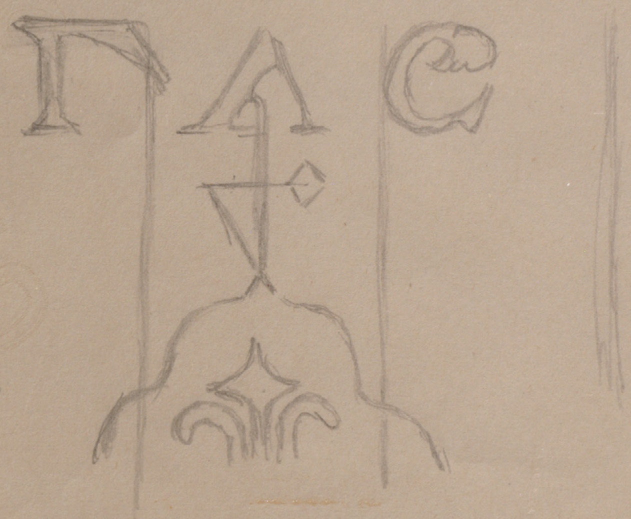

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Lectures on Physic,

as given by Dr. Wm. Saunders;
Physician
to Guy's Hospital.

Vol: 1st

Lecture 1st

The Introduction

The necessity of a knowledge of Anatomy is apparent. — Phisiology is entirely founded upon Anatomy, and is very necessary, as the body is a Machine constructed with admirable mechanism: hence Mechanics, Hydraulics & Optics are necessary. — Chymistry is also of considerable use in medicine, as without it we cannot counteract the operations of poisons, nor cure a number of diseases: the Qualities of the Blood and the operations of digestion are explaind by it: all our active preparations arise from Chymistry.

The Animal Machine has a peculiar manner of curing its own diseases, as in the incarnation of wounds, generation of Callus &c.

The comparative Anatomy of Brutes has produced numerous errors in Anatomy.

Phisiology treats of ye actions of a body in a sound state; so Pathology treats of the body in a diseased state, and of the treatment of diseases a practitioner ought to have a thorough knooledge of ye Materia Medica. —

It is amazing what absurd opinions & groundless Theories have been swallowed with great credulity, even to that degree which is enough to bring eternal disgrace on the noble art of healing. — Formerly all diseases were thought to derive their source or origin from, Plethora, Sour, Salt or Mercury and that there was a principle within us which cures diseases: here Sydenham calls a Physician a servant of nature.

We know there is a principle within us tending to the preservation of health and life; and an opposite principle tending to disease and corruption: when the latter attacks us with disease, the living principle sums up all its strength to overcome it. — Now if she runs into excess in any disease and produces Fever, violent purging &c. she should be suppressed; but on the contrary, if she should be too languid and weak, we should endeavour to assist her by increasing the Vis Vitæ. — Hence I think a Physician may with greater propriety be stiled the Counseller of nature. —

Most Authors rail against Theory, but it is with a view to establish different ones of their own: even Sydenham himself errs in this particular.

Tho' 500 People are cured by the Bark, yet as Constitutions differ so much, that without reasoning we should not attempt to cure another by it: every Physician should reason and search into the causes of diseases and Operations of Remedies, and be convinced only from proof; these are to be considered as real Physicians: but there are many who endeavour to make the facts subservient to their own opinions; others again think that an enquiry into the causes of diseases and operations of Remedies are useless, upon the success of one Medicine in a case, prescribe it in another where some of the symptoms correspond. —

Another error is the credulity with which facts with little foundations are admitted; this is prejudicial in nothing so much as Physic: hence the accounts of the effects of Medicines are obscure. — Whatever is ascertained as a fact should be recorded till opportunity serves to try its Truth, as nothing shews so much weakness as to reject any fact because we are ignorant of its operation. —

The diseases of ye human body are so complicated and various, that it requires the nicest skill to manage them properly: the Age, Sex and constitution of the patient should be examined carefully before we attempt to prescribe.—

Many remedies from the great desire we have for novelty, become at one time loaded w.th Honor, but presently after get into discredit; we might here name the Tar Water, Crude Mercury, Cicuta &c these were looked upon for a time as Panaceas, but were at length rejected as insignificant, nay worse, as the most alarming symptoms have happend in consequence of using the Cicuta.—

Medicine is the art of prolonging life, preserving health and of curing diseases, the Fountain and Source of Life and motion is the Heart, but it derives that source from the Brain: hence some define it to be like a circle; it has no beginning, every part deriving its origin from another: but I propose here beginning with the circulation of the blood —

Lecture 2nd

On the Circulation

I do not mean to enter minutely into the structure of the heart, but only consider it in ye general light of an hollow muscle: also that it has the power in common with other muscles of contraction, when stimulated: which contraction is the cause of circulation —

The Heart then is an hollow Muscle having four cavities, two of which are denominated Auricles and two Ventricles, into the former of which are inserted the Veins or vessels returning the Blood from the extremities, to which it had been propelled by Arteries: and from the Ventricles arise the Arteries themselves, or the canals through which the Blood is distributed to every part of the body for its nourishment

The Blood which has been thrown out to differant parts of the body is returned by the Veins, the Trunks of which enter the right Auricle, when this is fully distended, it causes an irritation, this causes it to contract, by which it is thrown into the right Ventricle, which when fully distended, contracts and throws it into the Artery which goes to the Lungs or the Pulmonary Artery. — The Blood is circulated in the Lungs, and it was an old opinion that it recieved its colour there; we think it undergoes some operation there necessary to its purification in order to render it proper for the several functions in which it is to be employed.

From the Lungs it is returned by the Pulmonary Veins into the left Auricle, which being full, contracts and forces its contents into the left Ventricle, from whence it is thrown into the Aorta, which conveys it to every part of the body.

That there may be the utmost reg=ularity and exactness in this course of the Blood which is so absolutely necessary to the welfare of the Animal, there are several mechanisms which prevent its dev=iation from and perfectly secures its procedure in this proper course.—

Thus when the right Auricle contracts, the Blood would return by the Veins which enter that cavity, were it not for the resistance it there meets with which of course must force it into the right Vent=ricle, its proper passage.— When the contraction takes place which throws the Blood into the Pulmonary Artery from the right Ventricle a great part of it would return into the right Auricle if nature had not provided the Valvulæ Tricuspidales to prevent its paſsage that way. — Nearly the same mechanism is used in the left Ventricle and Auricles; when the Ventricles have thrown the Blood into the Arteries, they dilate to recieve it, but when full, immediately contract to propel it forward: in this Case then the fluid would in great part, force its way back into the Ventricles, if ye Semilunar Valves had not been placed to prevent it. In this action of the Heart, the Auricles & Ventricles contract and dilate alternately, but the Auricles contract and dilate at the same instant; as do likewise both the Ventricles. —

The Heart itself is supplied with Blood for its nourishment by means of Veſsels sent off by the Aorta, which are called Coronary and is not nourished by the Blood which it contains in its several cavities. — These Coronary Arteries ramify with great minuteneſs, over the external surface of the Viscus and force their contents into a set of Veſsels which obtain the same name; these return the Blood into the right Auricle. —

The Arteries pour the Blood into the Veins by which it returns to the Heart. — this is one Species of Circulation: but there is another which is produced by means of a set of Vessels called Lymphatics, so minute as only to admit of Lymph, and provided with a great number of Valves. — The mouths of these Vessels lie open on every part of the body, both on the surface and in the cavities, from whence they absorb Lymph, and other Fluids, which are conveyed by them into the Thoracic Duct, and thence into the Blood at the left Subclavian Vein. —

Arteries terminate otherwise than by Veins, as in a fine set of Vessels which circulate a fine thin pellucid fluid only and will not naturally admit of the red Blood; but if by accident or disease, this is thrown into them, an Inflamation is the consequence; this is evident in an Opthalmia, where the Tunica Conjunctiva, becomes quite red from this cause alone.

Arteries terminate in still finer tubes composing a set of Vessels called Exhalents, which carry on the business of insensible perspiration & sweat, & also keep moist the internal surface of cavities, as the Pericardium, Tunica Vaginalis Testis &c. —

When the vessels destined to absorb this fluid deposited in cavities, from disease or any accident cease to perform their office, a Dropsy will necessarily be the consequence; as in these cases the Exhalents, continue still to deposit the same quantity of Lymph as before.

Arteries terminate also in excretory Ducts and thus is formed the humours of ye body, which are secreted in Glands, as Bile, Saliva, Semen &c the particular process however, we are by no means acquainted with.

The Anatomy of a Gland affords but little Information, but it is generally thought to be produced by Chemical means, tho' we are not able to determine what those means are: Some are of Opinion that the Veins conveying red Blood, act as absorbents, particularly Haller; this is however a point capable of great dispute. — Dr. Hunter with several other eminent Anatomists positively say to the contrary. — Haller corroborates his Opinion by the experiment of tying a Vein of the extremity, in consequence of which the part below becomes Œdematous, this he accounts for by supposing the Vein or absorbents being prevented from performing their office, the fluid is not taken up, which used to be; Dr. Hunter, however refutes on his own experiment & says Œdema is not caused

caused by a defect in Absorption, but is entirely owing to an increase of the fluid exhaled which is then in too great quantity for the Lymphatics to absorb. — Upon the whole then it appears that tho' there may be a possibility rather than a probability of the red Veins acting as general Absorbents, yet the single instance of it in the Corpora Cavernosa Penis is the only one that is certain.

Lecture 3d.

On the Circulation — Continued

At our last meeting I endeavour'd to describe to you the manner of the Circulation, that the Blood was conveyed by means of Tubes which are named Arteries, from the Heart to every part of the body for its nourishment, but that this is the real method was not then proved by experiments. — I described the Veins as Organs returning the Blood to the Heart, which had been distributed to various parts of the body for various purposes. — For this purpose I considerd the Arteries as Tubes, ending in another Series of Tubes, which becomeing gradually larger as they approach the Heart, are what I have called Veins, and do perform the office above described to them, neither of these were proved to be the case. — This then I shall endeavour to do by the following Argument. — First, if the arteries had not these communications with the Veins, which I have described to them, how is it possible to account for the effect of opening a larger Artery, which will immediately empty the whole vascular system and occasion certain Death. —

That Arteries do end in the Veins is fully proved by injecting some parts of the Human Frame, when the injected matter will be found to return by the Veins: these experiments then prove to a demonstration that there is such a communication: that the Blood passes to the extremities by means of Arteries, is demonstrated by tying one of these Organs, when a considerable tumour will be formed by the obstructed fluid contained within it on that side the Ligature nearest the Heart; and the same experiment when applied to a Vein will fully prove that the Bloods motion in those tubes is towards the same Viscus, as in this case the Blood will push out the Vessel and form a tumour below the Ligatures, as is every day experienced when we open a Vein.

Another proof that the Bloods motion

in the Veins is towards the Heart, is the numerous valves with which they are supplied which as we know from Injections will not permit the fluid to pass from the Heart to the extremities, while they are no longer obstructions if the Injection is thrust on from the Extremities towards that organ. —

In our last Lecture I also ment.^{d} a series of Vessels conveying a limpid fluid called Lymph, from every part of the body and depositing it in the Receptaculum Chyli & Thoracic Duct; that they performed this office of Absorption: but this was not proved then by any experiment; a very ingenious one however of Dr Hunter's proves it beyond a doubt. — He injected a liquor which was rendered odoriferous by means of Musk into the cavity of the Abdomen; then it appeared on dissection that the fluid contained in the Receptaculum Chyli and Thoracic Duct was strongly impregnated with the smell of that Drug, while the Blood in the Mesenteric Veins was not in the least affected, but retained its usual taste and odour: this experiment then also shews the erroneous doctrines of Haller with regard to the Veins acting as Absorbents.

Besides the Lymphatics there is another series of Vessels called Exhalents, which are supposed to be continuations of Arteries: this I say is the general opinion & which seems exceedingly plausible but can by no means be proved: Dr Hunter however has an opinion peculiar to himself, and will not allow that there is any such series of Vessels, as we understand by the term of exhalents, but says the insensible perspiration and sweat is produced by the thin serous part of the Blood oozing thro' the Coats of the Arteries: his reason however is not satisfactory.

A Question which may afford much agitation is whether the Blood is circulated by the force of the Heart alone, or whether it is propelled by a muscular exertion of the Arteries independant of that Organ? It seems reasonable to suppose they have that power from the observations that the intervals between the strokes or Pulses at the remote branches do not perfectly agree at all times with those near the Heart. — Thus the Vibrations of the Arteries of an extremity affected by a paralytic stroke are slower than those near the Vis Matrix and it is also found by experience that the Circulation in a limb will be not a little accelerated by ~~an~~ the Electrical Shock, when

the motion of the Heart is not at all affected. — The involuntary sensation of blushing, is also another considerable Proof that the Arteries have a power of propelling the Blood independant of the Heart, since it is produced merely by the more frequent Pulsations of the Capillary Arteries which are then much quicker than those of that Organ. — It has also proved that the impulsive force of the Heart loses its effect long before the Blood arrives at the capillaries and hence it must follow that it receives an additional propulsion from the Arteries.

Thus then we have fully accounted for the motion of the Blood in the Arteries, but its motion in the Veins is by no means so easily demonstrated: we will first premise that the Blood in those Vessels does not flow with a pulsatory force but in a continued equal stream: from this consideration it is apparent that their structure is well adapted to perform their office: it also appears to be most probable that it is propelled by the muscular motion of ye parts surrounding the Veins, and also by the neighbouring Arteries. — When it moves against its own gravity, as in the extremities we also find a number of

Valves, which mechanism will suffer the Blood to flow freely towards the Heart, but when it regurgitates, will effectually stop it. — The Veins are every where correspondent with the Arteries and are of a much finer texture and larger capacity.

The figure of both Arteries & Veins are said to be rather cylindrical than conical, and they both send off their Branches at acute angles, more particulary the former, except in some few cases. — The Arteries are much stronger in proportion at a distance from than near their origin, as is fully demonstrated by the Aneurism, which happens most frequent near the Heart. —

That the Blood is conveyed to the extremities by the contraction of ye Heart and Arteries, is already proved; but how is the contraction of ye Heart brought about to do this office? we know it proceeds from a stimulus, but what that Stimulus is has been a matter of dispute: some have said that the acrimony of the Blood occasions it: this is entirely overthrown by considering that the Blood in an healthy state is a perfectly mild bland

fluid: in this case then, the acrimoneous Stimulus being wanting the effect would cease, which is however quite the reverse of the true effect.

The generality of Physiologists however agree with Dr Haller whose Hypothesis seems to be the true one that the muscular fibres of the Heart are stimulated to contraction, not by any acrimonious quality in the Blood itself but merely as it distends the cavities of the Veins it being a fundamental maxim, that when a muscular fibre is stretched it is immediately irritated to contraction. —

If the contraction was occasioned by an acrimony in the Blood, we know from analogy that the effect or motion, would cease in time, from the Heart being used to the Stimulus: the Viscus would by degrees loose entirely its effect and become insensible and inactive: that this would be the case is evident from the use of Opium; which, unless the dose is encreased in proportion to the frequency of its repetition would entirely loose its effects, of on the Stomach: and we find by experience that this is not the case with Opium only, but with many other nervous medicines.

Thus then we must conclude that

if the motion was occasioned by an acrimonious stimulus in the Blood, it must be encreased in proportion to the duration of that motion, which would not long be the case consistant with Health. —

Many have attempted to ascertain the velocity of the Bloods motion, but all without success, or even the least shadow of it; nor is it possible to do it because we cannot determine the size and therefore the strength of the Heart, nor the capacity of ye arteries. —

When the Blood is in an acrimonious state the Heart is irritated to more frequent contractions. — This effect happens from two causes the acrimony of the Blood and its distending property.

(Pulse)

What is meant by the Pulse being the dilatation of the Artery, arising from the impulsive force of the Heart the principal organ of life; it is no wonder then that this effect should in all ages be looked upon as the most certain symptom & most to be depended on in almost all disorders, but particularly diseases of the acute and inflamy; kind: nor is this a groundless practice, experience

having regularly proved to be founded on reason & the best Physiological principles.

The Pulse will be more slow or frequent in proportion to the degree of Stimulus applied to the Heart and the greater or leſs degree of irritability of that Organ. ——

The Pulses of Animals differ in proportion to their size, the smaller the Animal the more frequent the Pulses: thus the Heart of a Pigeon will vibrate 120, while that of an Ox will not exceed 38 strokes in a minute.

The celerity of Pulses will differ accord-to the Habit: thus the Healthy standard in some shall be 60 & others 80, & so on: this as I said before will depend on the greater or leſs degree of irritability of the Heart: — from whence it appears that a Physician ought to be well acquainted with the natural state of his Patients Pulse previous to his illneſs — in order that he may be enabled to form a more competent judgement. — A Physician (Dr. Whyte) visiting his patient (a Lady) found the pulse to beat 180 in a minute: he was greatly surprised at this astonishing quickneſs, more especially as she was not much disordered, but on enquiry found

that the ordinary state of her Pulse was 120.

I have mentioned the proportion which the pulses of small animals bear to those of the larger.

The Pulses of Children also bear the same proportion to those of men, which effect is caused by the greater degree of irritability in their Hearts which will not suffer the cavities of that Organ to be fully distended before the contraction takes place: & these have more heats in proportion than adults.

The pulses of Children of three months old will be 120, & the heat in proportion: - of seven years of age will be from 80 to 100 - in Youth, from 70 to 90, - in Men from the 25th year to the 45th, generally about 76, and in women from their greater irritability, it will be 80. - In old men whose Hearts are not so susceptable of Irritation, it will generally be found to be about 60. -

There are many causes which will accelerate the Pulse. - Thus they will be quicker at night than in the morning, there being a greater degree of irritability at that time: this is experienced in most Fevers, which will in general be worse towards night.

Heat will generally accelerate the Pulse, upon this principle then it appears that

Patients labouring under inflam^y Fevers and other acute disorders, should be kept cool, and hence also the reformed Practice &c in the small Pox and Putrid Fevers. — Excercise is also another great cause of a quick Pulse; hence Patients in Fevers should be kept quiet, and instead of an erect should be placed in an horizontal position. —

The same practice will be necessary in cases of Hemorrhages of all kinds, more especially those from the Uterus. —

The quant^y and quality of food will encrease the Pulse: thus in general they will be quicker after a hearty meal than before, more especially if it was composed of Animal food which has a remarkable power of quickening more than vegetables. Spirituous & vinous liquors have also the same effect. — Hence it particularly behoves us to guard our patients against the use of these in disorders tending to inflammation.

It may sometimes happen that the Pulse shall be rendered quicker thro weakness, or debility; in this case then Cordials will render them slower. —

Another cause of quick Pulse is pain: this is evident in every circumstance

producing that sensation; every thing therefore tending to remove it will lower the Pulse.—

Passions of the Mind, Surprise, Fear &c, all contribute to produce this effect: Dr. Monro conscious of this, used always to talk with his patients at first on some indifferant subject, rather than enter abruptly on his examination of the disorder:—a practice this, worthy so great a Physician, tho' it may appear frivolous to some.

Electricity has also a surprising power of raising the Pulse, as is evident from its use on a Paralytic limb.—

The Pulse is also quickened by Acrimony; hence Pus absorbed into the Blood produces an Hectic fever.—

The Variolous matter in the small Pox, produces the secondary fever in that Disorder: this absorption then ought by all means to be prevented, as much as possible.

Whatever encreases perspiration will accelerate the Pulse & vice versa, as is the case in Asthmatical people.

In inflamation there is a resistance to the circulation in the extreme arteries:—the

action of the Heart is roused to overcome it, which gives us an encreased Pulse, and besides which, we have also a fullness. —

Dr. White observes that in Hysterical women the Pulse is extremely quick, which is generally diminished by a glass of Wine. — Blisters instead of encreasing the quickness of the Pulse renders it slower & fuller in low Fevers: but applied in the beginning of Inflamy. Fevers will prove very injurious by encreasing the symptoms. —

That weakness encreases the quickness of the Pulse is proved by examining animals about to die.

If a person has an inflammation in one arm near the wrist, and not on the other; in that arm where the inflamation is seated the Pulse shall be found quicker than in the other. —

Mercury will amazingly quicken the Pulse, more than almost every other Medicine in the whole Materia Medica.

The only exceptions in those particular cases before mentioned, is Wine & Blister, therefore if the pulse in Fevers become slower after the exhibition of Wine, it ought to be continued, but if more

quick & frequent, it ought to be discontinued. —

The variation of the Healthy Pulse is from 12 to 15. — In the Evening the Pulse in a healthy state are augmented about 10.

Before I finish this Lecture, I shall mention a few more particulars, which I omitted before.

The Veins in the Human body are 3 to 4 to the Arteries, for in the extremities there is generally two to one. —

After Death the Veins are gorged with Blood, and the Arteries almost empty. —

The Hæmorrhoids arise from Varicose Veins: for if any of the Valves of the Veins are injured, Varices will ensue, which are a kind of Venal Aneurisms.

— In inflamation of the Intestines the Veins appear red as if injected.

Poisons injected into the Veins, will prove deleterious & kill, more immediately than if injected into an Artery; as there is a probability of its being lost there, while in the Veins it is carried immediately into the Heart.

Ipecacuanha injected into the Veins will Vomit.

The Doctor mentions a man whose

Pulse was only 30 in a Minute; at his Death he was opened and his left Auricle found distended with Blood.

Lecture 4th

On the Pulse

In our last Lecture we enumerated the many causes of a quick Pulse; in the present we therefore we shall take notice of those causes producing a contrary effect; and those we must conclude to be diametrically opposite in their natures from the others. — First then a diminution of irritab=ility in the Heart and Arteries will produce a slow Pulse, from this cause; hence the Pulses of aged people are slower than those of young; Men more slow than women; Women than Children: upon the same principle the circulation of the Blood will be slower in the colder than in the warmer climates; from the same cause the Pulse also is slower in a large than a small animal.

Diminution of Stimulus also in the Blood is another cause of a slow Pulse; hence a slow is generally the most healthy & hence also the most sure sign of a Fever's abating is that of the Pulse becoming slower, and indeed it may with truth

be said, that the Pulse cannot be too slow in Fevers, if at the same time the degree of Dilatation is not increased. —

Sedative Medicines render the Pulse slower, as is the case with the Turks: as a proof that Opium taken in large quantities does this, if you open an animal and apply Tinct: Thebaica to the Heart, the motion will soon cease. —

And likewise taken internally it diminishes the peristaltic motion of the Intestines; hence it produces costiveneſs.

The reason why a slow Pulse is generally the most healthy, is because there is then leſs acrimony in the Blood.

Any causes tending to prevent the free circulation of the Blood thro' the Lungs will render the Pulse slow: hence Asthmatical People are observed to have slow Pulses.

Oſsifications in the beginning of the Aorta & Polypi of the Heart also tend to produce the same effect.

A slow Pulse when it is attended with much weakneſs is always attended with very dangerous consequence: this often attends the latter stages of slow nervous fevers. —

When the Brain is affected the Pulse will not be so much encreased as we might reasonably expect from the functions of the Nerves being in some measure disturbed. —

It is not only necessary for us to distinguish the Velocity and rapidity of the circulation but it is likewise incumbent on a Physician to pay the strickest attention to the manner in which it may affect the fingers, with respect to its fullness, strength, hardness, weakness, intermission &c, hence it will be necessary in the Operation to be acquainted with the causes which may obstruct the feeling.

Thus a cold hand has not that sensation in so perfect a degree as a warm one, for which reason a Physician should always warm his hand before he pretends to feel his Patients Pulse.

The greater or less degree of thickness of the cellular membrane between the fingers and the Artery will also in some measure obstruct the feeling; for which reason, more especially if ye Patient is fat and corpulent, we should compress the

Artery so much as totally to obstruct the passage of the Blood through it, after which by letting the finger recede by degrees from the Artery, we shall be able exactly to ascertain the quickness of the Pulse and the degree of Dilatation. —

An Artery in its vibrations may exceed its natural dilatation & yet the number of Pulsations do exceed the standard or frequency this gives the full Pulse, or the Pulsus magnus. — If the Artery falls below its natural dilatation with quickness, this is the Pulsus parvus or slow Pulse.

If the dilatation is both greater than natural and its frequency greater too, we shall have a strong quick Pulse or Pulsus fortis, or inflam.y Pulse. —

If the Pulse falls below its natural dilatation and is slower than natural it is called the Pulsus Debilis. —

The Pulsus magnus is owing to strong contractions of the left Ventricle by means of which great quantities of Blood is thrown into the Aorta at each Systole, and this is the Pulse of healthy robust people. —

An oppressed Pulse arises from Plethora or too great fullness of the Vessels, by which the natural

systole of the ~~Heart~~ Artery is prevented by the resistance it meets with from its contents: here Bleeding will raise it & cause the Pulsus magnus: this oppressed Pulse argues great fullness in the Habit and shews the necessity of Evacuations.

We have always an Oppressed Pulse in the Peripneumony and Inflammation of the Intestines and upon taking away a few ounces of Blood the Pulse will rise, which is a certain sign of its utility. — If a Plethoric Woman has much pain at the beginning of her menstrual discharges, a few ounces of Blood taken away will procure circulation.

The Pulsus magnus is brought on by Diseases especially those of the Head, it generally attends stupor, Vertigo, Apoplexy, & concussions of ye Brain; the whole system being by this means less irritable, the Heart will admit of a larger quantity of Blood before it will contract.—

The Pulsus parvus attends the latter stages of Fevers, whether inflamy, Putrid, or Hectic, and is occasioned by acrimony in the Blood, exciting frequent contractions of the Heart, independent of the quant.y of the Blood: — it likewise attends nervous, Hysterical, & irritable people, as the Heart then is

very irritable, which causes the left Ventricle to contract before it is sufficiently full: here I think the free use of Opiates will be of great service.—

The Pulsus fortis may be illustrated by the Pendulum of a Clock, if you hold your finger while it moves slowly, it will strike softly, but if the motion is encreased it will strike very hard: here the left Ventricle pours out large quantities of Blood into the Aorta; whenever the Heart finds any resistance to the circulation its action is encreased in order to overcome it; whenever there is a large quantity of Blood returned by the Venæ Cavæ this frequency of Pulse will be produced; hence this Pulse is attendant always on the Pleurisy, acute Rheumatism and several other inflam^{y} Disorders: here Bleeding will be of great service, as will evidently appear after the operat^{n} and it generally requires to be repeated.

In the sweating Fit of an Intermittent the Pulse becomes fuller & freer, from being very quick and small.— This Pulse produces the inflamm^{y} buff on the Blood.

At the beginning of the Autumnal fevers we have this Pulse; and though large Bleedings will be of infinite service in the one, it will frequently

be of great hurt in the other, hence in Malignant Fevers we should avoid it.

In inflam.y complaints we have frequently an oppressed Pulse; here we should not be afraid of Evacuations, which will not fail to raise it: but if this Pulse depends on the Dilatation from acrimony it will be encreased by V.S. rather than diminished and the complaints aggravated:— thus in the beginning of Putrid Fevers we always find an astonishing sinking of the Pulse after a trifling evacuation of this kind; for when the quality of the Blood causes this affection, we cannot by drawing away a certain quant.y of it, remove the cause; which is the case when it arises from a Plethora:— it must be confessed however, that to discover which of these differant causes produces this Pulse requires no small share of judgment and attention.

The Pulsus Debilis arises from a diminished dilatation & decrease of Velocity, and shews a deal of weakness in the Habit: this Pulse is called by Dr. Huxham the fluttering Pulse, and generally occurs after lingering disorders, profuse Hemorrhages and frequently takes place after a quick Pulse.—

The intermitting Pulse, that is so frequently observed to follow profuse Hemorrhages

does not proceed from a stoppage of the Bloods motion during one or more Pulsations, but from a diminution of the quant.y passing thro' the Artery, which is not sufficient to distend it and give it the proper Diastole, so that several contractions of the Heart are necessary to give one dilatation on the Finger.

The Pulsus debilis in its greater degree & quickness is called the creeping Pulse & is often met with in the nervous Fever.

A sharp Pulse is where the finger is suddenly struck by the dilating Artery.

The state of the Pulse has been frequently attended to as affording means of cure & enabling us to make proper Prognostics.

We frequently observe in acute disorders that the Pulse appears to the fingers as if it rebounded; which is caused by two contractions of the left Auricle of the Heart during one dilatation of the Aorta: This rebounding Pulse from repeated observations is found always to preceed an Hemorrhage of any kind; & the more frequent & evident these rebounds or double strokes of the Pulse, are, the more profuse and nearer the Hemorrhage is found to be, which, generally proves critical, especially from the nose in acute disorders.

In acute Fevers is also observed an Intermitting Pulse without any apparent weakness, which, denotes an approaching Diarrhea, which, in such cases is often critical.

There is also another Species of Pulse found in Acute Fevers, which is called the Pulsus   or the wavering Pulse, which is when the Dilatation of the Artery continues encreasing during three or four Pulsations of the Heart: — it gives a sensation as if one stroke drove another, and this Pulse is also attended with a softness: it mostly Prognosticates an approaching Diaphoresis; which, also proves critical.

Suppose nature meant to produce a Hemorrhage in any part of the Body, she therefore produces every advantage for that purpose: the rebounding Pulse then is the second Diastole bring.g on before the preceeding column of Blood is bro.t forwards.

A Diarrhea is a great secernation of Fluid by the extremities of the Arteries of yᵉ Intestines and if the Fluid goes off in this manner, the Veins will have less to return to the right side of the Heart and hence will occasion an intermitting Pulse.

The Pulsus plenus generally

precedes the menstrual Flux: the inflamation of the Intestines also gives this Pulse, contrary to every other kind of inflamation, and which, the Pulsus fortis alm-ost always attends.

An intermitting Pulse with a fluttering of the Heart is one instance of a Hydrops Pectoris. — But I am persuaded it requires a long habit of feeling the Pulse to be able to judge of it with any degree of accuracy; tomorrow I shall give an account of the nature and properties of the Blood and of the Fluids secreted from it.

Lecture 5th

The Component parts and properties of the Blood.

That fluid which is contained in ye Arteries and Veins and circulates thro', is called the Blood —

Many attempts have been made to ascertain the quantity of this fluid in proportion to the other parts in any subject: nothing can be gathered from Bleeding an Animal to death, since it will die before the vessels are exhausted of Blood, therefore we can only know from this experiment, how

great an Hemorrhage will kill the Animal.

The quantity of Blood in a~~n animal~~ Body will differ according to the age and temperature of the Animal. — The common computation seems to be too low, for we have instances where thirty Pounds of Blood has been lost without fatal consequences; I myself have seen ten or twelve pounds lost and the patient survive, and a Physician told me he had known a man looſe four pounds p. Diem for near a month, and Dr. Heller tells us of a Lady that lost by the Menses 12℥ of Blood every month. —

The computation nearest the general run is thought to be as one to five i.e. in proportion to all the other parts in the Body. — I think there may be about thirty pounds in the Habit. —

Fat people have leſs Blood than lean. Children have more Blood in proportion than Adults.

We will now proceed to consider the properties of the Blood, the chymical properties of those parts of which it consists. —

The Blood as it flows from the Veſsels appears like an uniform Homogeneous Fluid, but soon concretes into an agelatinous maſs:

This concrete happens sooner or later, according to the state of the particular Blood, generally in about seven minutes if it is not inflamed, but if much inflamed it will remain fluid during the space of fifteen minutes or more; therefore when Blood is a good while in concreting, we may be sure it is inflamed. —

The cause of the Bloods being inflamed as will hereafter be proved is the encreased action of the Heart and Arteries, — therefore with a view to stop Hemorrhages, we should always endeavour to weaken the Patient, by which we weaken the impetus of, abate the inflam.y Diathesis & dispose the Blood to coagulate: this is founded upon experience as well as theory, for in Uterine Hemorrhages the most effectual means is to Bleed or allow the Hemorrhage to go on, and thus the Patient by being weakened will have the Hemorrhage stop'd; and here if we give Wine & Cordials we shall find it encrease. — But in long continued Hemorrhages the whole habit may become Leucophlegmatic and Dropsical and here Bleeding would be improper & Styptics with astringents may be employed to advantage.

The Air contributes much to the concretion of the Blood, for if you make two Ligatures on

an Artery it will be a long time before it contracts; but if it be at rest in the Body it will in a course of time, as is evident from the coagulated appearance in Aneurismal Sacks, and from the Coagulum discharged from the Uterus in Hemorrhages.—

The Mass will be more or less dense in proportion to the strength of the Body and degree of Heat: hence Plowmen have this Mass, more firm than persons of a less strong tense fibre.—

The acrimony of the Blood in Putrid and Malignant Fevers prevents the Mass from becoming firm and dense for here it is dissolved and in some measure Putrid.—

While the Blood is evacuating from the Orifice there is a fine subtile fluid flies off from it in the form of Vapour, which is called the Halitus of the Blood, and which we may collect in a watery form, by suspending a piece of polished Glass over the Vessel.

This Halitus I think is the same as the insensible perspiration, and appears on examination to be composed of an aqueous fluid, mixed or impregnated with a fœtid Salt and a kind of pungent Oil.—When it is thrown out in a small quantity it is called perspiration and then in

a larger, Sweat, which differs from perspiration only in being more gross. — We may collect the perspiration with a glass in same manner as before laid down —

The Vapour from the Lungs is the same kind of Fluid as that from the Skin & to throw it off, seems to be one great use of that Organ. —

No heat will coagulate this fluid: the Salt it contains seems to be of an Ammonical kind similar to Phosphorus. —

In putrid Fevers there is always a greater quant.y of Halitus from the Blood, which is more Putrid than from any other kind of Blood.

There is more danger of being infected with this Halitus in putrid complaints than from conversing with the diseased Person; it is the Vehicle of contagion, and a person may as well be in contact with the body of a diseased person as to suspend his head over that Vapour

After the Blood is to all appearance formed into one uniform Mass, it gradually seperates into Crassamentum or Cruor & Serum.

The former of these is a dense weighty substance and consists of two parts: the red part or Globules which give the colour to the mass;

And a certain coagulating part called the coagulable Lymph, similar to the white of an egg, coagulating on being exposed to a certain degree of heat as that does.

The Coagulable lymph coagulates with less heat than the Serous: — you may dissolve it with nuetral salts, hence their use in Fevers and Dropsical complaints.

The Cruor or red part of the Blood may be seperated by means of Ablution from the coagulatg. part, which will then appear fibrous, of a white colour; hence many Physiologists have talked of the fibrous part of the Blood, meaning only this coagulated part.

The red Globules when washed ff from this coagulating part by Water will on standing sink to the bottom of the vessel, when the water may be filtered from it.

The Serum or watery part of the Blood if exposed to 160 degrees of Farenheit's Therm: it will coagulate. —

It is composed of Lymph and two Salts which is demonstrated by exposing it to a degree of Heat, when the Vapour arising from it will be found to be water, by encreasing the heat to 160 degrees it will coagulate; from this coagulum by Chymical process

may be obtain'd two Salts, the one common in all its properties (those who eat most of it have most in their Serum) and the other an Ammonical Salt composed of a Volatile Alkali and an Acid, not improperly called Phosphorus, since we can extract a Salt similar in effects from Urine, which is called by the same name, these two Salts combined compose the neutral ammoniacal Salt above mentd.

If you put to Serum a quantity of any kind of neutral or Alkaline Salts it will not coagulate in any degree of heat. — the use of these therefore keeps the Mass uniform, prevents its coagulating in the Vessels and promotes its fluidity; hence the use of the Salts in the Blood: weak acids do the same. Spt. Alcohol &c coagulate it, hence proceeds Visceral obstructions from their use. — In the Liver &c when the Blood is coagulated it will not circulate thro' the small Vessels of that Viscus.

The Serum of the Blood when once coagulated, is not to be dissolved but by the Caust: Lixiv: hence the difficulty of dissolving Polypus concretions.

The Serum of the Blood does not

dissolve the Crassamentum or red part but the red part is diffused thro' it.

The Serum is the Vehicle of acrimony, and of every thing sent into and foreign to the Body; all Medicines taken by the mouth circulate in the Serum and ~~in~~ the Bile in people affected with the Jaundice is mixed with it.

The Serum is also the vehicle of every fluid that is seperated from the Blood, as Urine, Saliva, Sweat &c; the only change it undergoes in the Kidneys is to be filterd so that its coagulable parts remain behind.

Hence Medicines conveyed into the Blood, more immediately affect the Serum; which evidently appears by the Evacuations they occasion, Salivation, Diarrhea, Sweat &c. consequently when the disorder is situated in this part of the Blood, proper Medicines may more immediately be applied and the disorder cured.

The red part of the Blood on the contrary, is the part that conveys the Diet nourishes & renews every waste of the Solids whatsoever: for this reason it is that animal food is more nourishing than Vegetable, from this cause also it is found in greater quantities in strong people. ——

The Red Globules when separated from the other parts by ablution, are found by Chymical examination to have several peculiar properties.

When exposed to a considerable degree of heat in a Crucible, they will take fire, shewing by this that contain an Oil; which, is supposed to give the red colour to the Blood, and which is supposed to counteract the stimulating quality of the Saline parts of the Blood.

The Residuum remaining after evaporation will be strongly attracted by the Magnet; an evident and sure sign this, however strange & inconsistent it may appear, that it contains a portion of Iron, & this however in small quantity; for instance an hundred weight of Blood will contain a drachm and a half of Iron, more or less according to the Habit.

The proportion of each of the constituant parts with regard to each other cannot be ascertained but depend entirely on the age, Strength, Health, Exercise and Diet of the Patient: — but in general it will be found that the red parts or Globules of the Blood and coagulum, will in a strong healthy man exceed the other parts in quantity.

The red Globules are renderd more firm dense and ponderous, by inflamation, from which cause it happens that they fall to the bottom of the Vessel from their greater Specific gravity, leaving the Coagulum floating on the top which, is then denominated an inflam.y Buff. — Hence by weakening the force of the heart Arteries, by repeated Bleedings we may mostly prevent this inflam.y of and reduce the Blood to what standard we please.

This happens always on the Blood of Women with Child, by reason of encreased stimulus, for these have more animal heat and are not witht. some degree of Fever, and the whole system might be emptied before their Blood would loose this appearance.

If a Ligatures be kept upon the arm of a healthy person half an hour before we open a vien, we have this appearances, from the encreased action of the Heart and Arteries. —

Mercurial preparations will always encrease the inflam.y disposition, and consequently the Buff on the Blood: hence the Antiphlogistic regimen cannot be too rigidly attended to during a mercurial course & V.S. in Plethoric Habits should

as a preparative always preceed Salivation; and hence the danger of giving this Medicine in Inflammations of the Breast, or hectic constitutions.

If you observe the Buff on the Blood taken from an inflamed person to be contracted on the surface into the form of a cup, it urges the greatest degree of inflammation.

In various inflammations as of the Bowels &c. the Pulse is small, when if Blood is taken away, it shall not put on this Buffy appearance as in other inflammations, but if we repeat Bleeding, the Pulse will rise & as the circulation increases the Blood will put on that inflammatory appearance which it generally does at the second or third Bleeding: — therefore we cannot always judge of the case, from the appearance of the Blood at the first Bleeding.

Again if the Blood in an inflamy disease be taken away by a small orifice, or trickles slowly down the arm, and is recieved into a flat Porrenger, this Buff will not be formed; for the Blood here cools so rapidly that the Globules have not time to subside: hence the advantage of making a large orifice. —

The red part of the Blood is found to have the greatest specific gravity, which, encreases its momentum & Velocity, which specific gravity is much encreased by the Iron in its composition; & from hence we may derive the true reason why Steel always raises the Pulse, encreases the Animal Heat & strengthens the Habit in general.

This is the most reasonable theory & Analysis of the Blood, but Lewenhoeck has another hypothesis, on which all Boerhaves theory of inflamation is built.

He supposed the Blood to be composed of Globula of different magnitudes, which circulating thro' canals of the same dimensions: thus he held that one globule of red Blood was composed of six globules of Serum and thought that the association produced such a degree of density as to give it the red colour, according to Sr Isaac Newton's System of colours, who held that their difference depended entirely on the density of the bodys from which they were refracted.—

Lewenhoeck also supposed one Globule of Serum to be composed of six Globules of a fluid still more subtile and this he argued was the case ad infinitum.

On viewing a very minute portion of Blood by means of a good microscope, it appears indeed plainly that a number of particles of red blood will be seen swimming in a finer fluid or the Serum, but from the experiments of Mr. Hewson it also appears that those particles are not spherical but lenticular, as I myself have often seen.

Mr. Hewson also declares that there is a hole in the middle of each globule on its concave part.

These experiments then overthrow entirely Lewenhoeck's & Boerhaaves system which depended entirely on the Globules being Spherical.

Mr. Hewson also maintains that they are solid, which is by no means impossible, nay it is in the greatest degree probable, when we consider their greater specific gravity, which causes them to fall to the bottom of the Vessel on standing

sometimes.

The supposition is still further confirmed by the Iron which we find in this part of the Blood: it is also absolutely necessary that they should be so, lest they should be dissolved in the Serum by the action of the Heart & Arteries and other organs which contribute to respiration. —

The only thing that can tend to destroy them is Putrefaction, which not only destroys their figure & texture, but also their colour.

The colour that the red Globules give the Blood they seem to acquire from the Lungs, as Arterial Blood is more florid than Venal.

That the Air of the Lungs produces this effect appears after V.S, for then the upper part of the Blood appears red while the under part is of a darker colour.

The most accurate mensuration shews us the heat of the Blood is from 90 to 100 degrees of Farenheit's Thermometer.

In cold climates the natural heat is as great as in hot, and is remarkable in South Carolina &c

The Blood will continue in the

same degree of heat when the air is much warmer. I believe in the most ardent or putrid Fevers the heat of the Blood never exceeds 112, for 120 degrees will coagulate it, and we have never any such increased degree of heat as to produce this effect.

No Medicine can be absorbed into the system, in a sufficient quantity to coagulate the Blood: but by injecting an Acid into the Veins of a Dog we may kill the Animal.

It has been the opinion of some that the Coagulum found in the Cavities of the Heart and Veins take place in the time of death: but I have seen white fibrous coagulae, which must have been formed during the life of the Animal; these are called Polypi and are frequently met with in the larger vessels, near the Heart, particularly on the right side of it, or in the Venous sinus, and will cause difficult respiration, Faintness, Dropsy, Palpitations of the Heart &c.

The temperaments of the Blood are these. ——

When the watery part prevails it gives what the Antients called their Phlegmatic temp-

ceatment; when the red part, sanguinous; when the serum was tinged with Bile, Choleric: when it abounded more with Bile it then atrabiliary.

The use of the Lungs, Respiration &c

I have before observed that the causes of circulation consisted of the Heart & Arteries: but there is another Organ contributing to that purposes without whose assistance the other two prove insufficient. This is the Lungs or Organs of Respiration, by whose action the Blood is propelled from the right to the left side of the Heart.

The action of Respiration is that by which the air is drawn into & then expelled from the Lungs. — In order to explain the nature of this action it will be necessary to give a short general account of the Organs concerned in it.

The Lungs or principal Organs of Respiration are situated within the cavity of the Thorax formed entirely by the Sternum, posteriorly by the Spine & laterally the Ribs;

which last have a rotatory motion at their articulations with the Spine, which suffers them to move upwards and downwards: by this Mechanism the cavity of the Thorax will be enlarged when they are raised, in order to give sufficient room for the Dilatation of the Lungs, and rendered smaller when they sink in order to compress those organs & by that means contribute to the expulsion of the Air, at that time contained in them.

This motion of the Ribs is performed by different muscles, which act diagonally.

Thus when the intercostals act, the Ribs are drawn to one another and the whole Thorax is elevated, because the superior ribs have little or no motion. — Besides the muscles serving to elevate the Ribs, there is another very remarkable muscle serving to depress them, and thereby lessen the cavity of the Thorax: this muscle is called the Diaphragm and is situated between the cavities of the Thorax & Abdomen, between which it forms a compleat partition.

The Lungs are divided into two

Lobes which lie one each side of the Thorax; which cavity, is divided by a double membrane, called the Mediastinum, cutting off all communications between the two sides of it.

The air rushes into the Lungs thro' the Larynx as soon as the cavity of the Thorax is enlarged by the action of the intercostal muscles and others destined for that purpose.

The contraction of the Diaphragm and other depressors immediately succeeds, which contract the cavity, depresses the Lungs & thereby expels the air again by the Larynx.

The structure of the Lungs is wholly vascular & vesicular; the Asperâ Arteriâ by means of which the air is conveyed into them is a ramifying tube, the extremity of whose branches end in the Vesiculæ, as is fully demonstrated by throwing an injection of Quick silver into it, when they will appear to the naked eye.

The pressure of the air in these Vesiculæ propels the Blood onwards, from the right ventricle of the Heart to the left Ventricle; that this is certainly the case may be easily demonstrated by a simple experiment.—

Inject the Pulmonary artery with a quantity of subtile injection sufficient to fill it; then inflate the Lungs and expell the air again, in the same manner as in the act of Respiration, when you will find the injection to pass into the left Auricle.

Besides this use of the Lungs, there are several others: first, the air in the Lungs keeps up the proper Equilibrium of Heat which would increase to a great degree if the Blood did not come almost in contact with the cool air every now & then rushing into the Lungs; which diminishes the Heat, which it contracts by the motion of the Lungs, Heart & Arteries &c.

Another use of the Lungs is to convey off in Vapour a quantity of a finer subtle Lymph discharged into these Vesiculæ by the exhalents: this fluid may be perceiv'd when we breath on any polish'd surface, as Glass &c

Whether this discharge is of use to convey off a superabundancy of Serum or any noxious particles, we cannot surely ascertain, but that it is of use is very evident from the remarkable provision made for its Exit.

This is so very apparent that an

Injection thrown into the Pulmonary artery will pass into the Vesiculæ by the Exhalents: some have apprehended that part of the air gets into the Blood for some purpose unknown to us: this I can by no means approve, since it is well known that water will pass where air cannot.

Thus if you tie down a wet Bladder over the top of a receiver of an air Pump and exhaust the air; no air will be able to pass into the glass thro' the Bladder, but throw a drop of Water on the Bladder & it will insinuate itself into the reciever falling down in small Drops.

In order to keep up Respiration it is necessary ~~that~~ the air drawn into the Lungs should perfectly retain its elasticity, or it will not dilate them in opposition to the depressing Muscles of the Thorax.

Thus when the Elasticity is destroyed by any means the air becometh unfit for Respiration. Thus we cannot breethe in our own Atmosphere for any length of time, for this reason.

And thus the air of high places is not capable of distending the Lungs; consequently people breething in such air, must do it with

greater difficulty if they do it at all.

Fumes of Charcoal destroy the Elasticity of the air: hence Animals die in such situations where they are recieved into the Lungs.

Dr. Boerhave supposed that Animals could not breathe in an Atmosphere hotter than their own Blood & hence accounted for the Phenomena above mentioned. —

This is however by no means the case as Dr. Hales has fully shewn: he put a dog into a Room & conveyed air into that Room thro' a red hot Pipe of Clay and the Dog survived it.

He repeated the experiment suffering the air to pass thro' the Fumes of burning Charcoal which immeditately killed him.

Another proof that an Animal can breathe in an Atmosphere hotter than its own Blood is the common observation that of America the heat is so intense that the Thermometer will evidently descend when put into the Mouth. —

Lecture 6th

On Secretion

Having treated of the Blood and its circulation in our former Lectures, we shall now

proceed to consider those fluids that are seperated from it for the uses of the body; these are called the secretions: the nature these fluids are of and the manner or method adopted by nature for their seperation in different parts of the body for different purposes.

Secretions may be considered as of four kinds. — The first kind of secretion consists of a fluid exhaled from the extremities of the Arteries into the different cavities of the body; as the Abdomen, Thorax, Tunica Vaginalis Testes &c. This coagulates in 150 degrees of heat. —

The use of this fluid is to keep the parts on which it is poured soft, & to prevent adhesions of one part to another, which would otherwise unavoidably have been the case.

It is perfectly thin, clear & limpid when discharged from the exhalents, but after sometime it becomes more viscid & gelatinous, if not taken up by the absorbents: in this state also it is found after death.

When the absorbents do not take up this fluid that is lodged in the cavities, in the same proportion as it is discharged by the Exhalents an accumulation or dropsy must be the consequence.

If this happens in the Abdomen,

it is called Ascites, if in the Thorax, Hydrops Pectoris & so on. — The fluid that is exhaled from the Arteries in the Stomach which is called Succus Gastricus also belongs to this class of Secretions.

A second kind of Secretion consists of a subtle fluid exhaled from the extremities of the Arteries not coagulable by means of fire, Spts of Wine or any other application; but perfectly capable of evaporation by the application of heat. —

Of this class is the Sanctorian or insensible perspiration, Urine & the Saliva: the Tears also & the Pancreatic Juices may be reckoned of this sort. — A third class consists of a fluid issuing thin & limpid from the Artery not coagulable by Spts or Heat but growing more viscid in proportion to the time of its discharge from the exhalent; it is lodged in a vast number of mucus Follicles, which are distributed over the internal surfaces of the Bronchiæ, Pharynx, Œsophagus & all the Intestinal canal, the Urethra, Vagina &c, & every part of the body which is exposed to any kind of irritation: it is remarkably soluble in alkaline Salts, particularly in the Caustic Alkali diluted; which have the

best effects in dissolving the connected principle of
Calculi.

A fourth Class of Secretions consists of a fluid discharged by the exhalents, also thin but on staying sometime in the Reservoir becomes more thick, viscid & acid and is of an inflammable nature: Of this kind are the Bile, Wax of the Ear and all the Sebaceous Secretions: all the secretions which come under this class have evidently an oily quality which causes their inflammable properties. —

All Fluids separated from the Blood however limpid they may be when secreted acquire a degree of viscidity on remaining sometime in the Reservoirs nature has appointed for them: & if we find any Secretion viscid in its excretion, it is because the absorbents have taken up its finer and more subtle parts during its stay in the Follicle or Reservoir, for all secreted fluids are first nearly if not equally subtle & limpid.

Thus the Saliva in the morning, will be found quite viscid, whereas if it is secreted & discharged immediately into the mouth, as is the case when we taste any stimulating substances, it is then quite thin pellucid & limpid.

The Semen is quite limpid till it

arrives at and is deposited in the Vesiculæ Seminales where its finer parts are absorbed & it consequently acquires that degree of viscidity which it retains till it is discharged.

The Bile affords a remarkable instance of this absorption in the Follicle, for it will be found much more viscid & acrid in the Cystis Hepaticus than in the excretory Ducts.

Having ment. these secretions and their divisions I shall next proceed to shew the general means which nature employs to procure their separation, and also the more particular methods she takes to effect the evident differences between each secreted fluid. — There seems to be four principle circumstances in the Animal Oeconomy which operate on the Secretions in general.

First, the different diameters of the Vessels which perform these offices: hence the evid^{t} difference of the viscidity of the different Secretions when separated from the Blood.

Thus the Sanctorian or insensible perspiration, is by many degrees a more subtle fluid than the Adeps, because the Vessels secreting

the former are infinitely more minute than those of the latter.

The Urine of persons affected with the cold Fit of an Ague, is made limpid & transparent like water; but when the fit goes off this secretion becomes high coloured, thick & even deposits a sediment which Phenomenon is occasioned by the dimensions of the Diameters of the Vessels (Exhalents) during the Spasm or Rigor (being lessened) which will not then suffer a fluid so turbid as the Urine then commonly is to pass thro' their canals. — The consequence of the Rigor is constantly a burning Heat by which the Arteries are so much relaxed, as even to permit a fluid loaded wth. Feculencies to be discharged.

Secondly; the quality of the Blood sent to a secreting Organ is a circumstance which affect the Operation of that Organ.

On this principle it is that many Physiologists have asserted that the Blood sent to the Liver by the Vena portarum is much better adapted for the Seperation of Bile, than any other, and some gone so far as to assert that it has even then a bilious taste; this Opinion however is not much entertaind and indeed it was at first only founded on supposition that the Blood returnd.

from the Mesentery, Intestines, Spleen &c acquired from those parts an oily nature which afterwards constituted the oily & inflammable properties of ye Bile.

Thirdly; the greater or less degree of Velocity with which the Blood is thrown on a secretory Organ: - the greater the impulse on a vessel, the more viscid will be the secretion; hence the high colour'd Urine in acute Diseases. - Thus sweating is produced by violent exercise, which is no more than an encreased of the Sanctorian Perspiration & brought about by the too violent impulse of the Blood on the Exhalents. - From this principle perhaps arises the superior intellects which little delicately framed people in general enjoy in comparison with those of a more robust make, and who use more violent exercises, for instance an Husbandman &c. - In this case we must consider the Brain as a gland, secreting a subtle fluid called Animal Spts, which being conveyed by the Nerves considered as excretory ducts, influences all our sensations.

Fourthly; the structure of a secreting Organ is another principal circumstance affecting its secretion: this however I am afraid we least

understand. — Glands are divided into conglobate and conglomerate; the former seems to consist of a single Follicle as it were, being one smooth globular secretory substance; of this sort are the Thymus, Thyroid & Mesenteric Glands. — The latter on the contrary seems to consist of a great number of small Glandulæ like a bunch of Grapes, and this conglomerate appearance is seen in its smaller particles by the help of Glasses: from each of these smaller glandulæ all Physiologists agree there is sent off an excretory duct; all which ducts uniting at last form a larger duct by means of which the secreted humour is more immediately discharged for the use of which it is adapted. — But with regard to the structure of the part itself, which performs the secretion they are much divided. — Two Hypothesis however only seem at all plausible those are that of Malpighi and Ruysch; the former of which alledges that the secretory powers are lodged in a Follicle which is furnished with an Exhalents & one or more excretory Ducts: — While the latter asserts that there are no Follicles but that the excretory Ducts are only continuations of the Exhalents, and that some of the Arteries going to the Gland end in excretory Ducts, while others end in Veins, which

return the parts of the Blood which are improper for secretion.

Dr. Boerhaave espoused the Malpighian system and wrote a treatise in its defence but Ruysch produced such arguments in his answer to it as to make a Proselyte of him.

Perhaps both the Physiologists are right in some cases yet granting this or that either of them are right & the other wrong; we are left as much at a loss to account for the differances of secretions as before; & possibly that which we already know is our ne plus ultra, consequently we must for ever remain where we are.

On Plethora.

I would observe to you that particular dispositions in the Habit render people liable to particular diseases.

The particular habits I shall now point out to you in my future Lectures.

I will now begin with that disposition of the habit which depends on the quantity of Blood being too great for the powers of the heart & arteries to circulate properly; this is called a Plethorâ

A large quantity of Blood is not necessary to constitute a Plethora, since a small quantity may occasion it as well as a large one;

but this disposition depends entirely on the too great proportion of or the resistances which the Blood makes to the strength of the circulating powers.

Thus if these powers are too weak to carry on the circulation of any quant.y of Blood be it ever so small, that inability will constitute a Plethora; as much as if the quantity was ten times as much.

Upon this principal it is that we Bleed in Hectic fevers, where there is an Ulcer in the Lungs, tho' the patient is much reduced & debilitated by the fever; yet the proportion of Blood to the strength of the heart &c, is so great that unless we diminish that quantity, the violent agitations of the Lungs to circulate it will render the Ulcer much more large & dangerous.

A Plethoric Pulse is an oppressed Pulse for this reason, because the quant.y of Blood in the Artery will not suffer it to return by its natural Systole. — Thus pulse always rises upon Bleeding.

A Plethoric habit of Body is subject to acute distempers upon the least irritation, because whatever cause will produce an accumulation

will also give rise to those particular disorders.

The causes of Plethora are many - a sedentary life, too much sleep, Indulgence in the use of animal food, obstructions of the ordinary evacuations as Perspiration, menses, Haemorrhoids &c.

A Plethora may be either general or local. - When the structure or situation of any part tends to favor an influx of Blood to that part & not its return from it again, there must necessarily follow an accumulation or local Plethora: this is evidently the case in the Uterus; the depending situation of which, the general laxity of its structure, the slow circulation from the serpentine forms, distensibility of those vessels, which is so considerable that if you dissect a subject during Menstruation, the Arteries will be found capable of admitting a Gooses Quill; the weakness of their structure, which are not sufficient to propel the Blood, the want of Valves in the Veins of that part: all these causes contribute to produce an accumulation of Blood; the distension of the vessels becomes so great that their Coats ~~are~~ no longer capable of resistance, burst and discharge a certain quantity of their contents, sufficient to remove the distension:

In a stated time the Vessels are again distended, by the same causes & the same effect is produced; and this menstruation proceeds regularly at stated Periods.

The symptoms of general Plethora are a full oppressed Pulse, full Veins, Incidence to Venery, florid complexion, tendency to corpulency, difficult Respiration, Hæmorrhage, Fever & inflamation.

Many of these signs however are fallacious. — The corpulency may proceed from several other causes.

A florid complexion may also be owing to the superficial situation of the arteries of that part: several other symptoms may also arise from other causes, but the surest sign is the fullness of the Veins and the oppressed Pulse, which on bleeding will never fail to rise.

This disorder or rather particular state of the body, is, like all other habits better preventd. than cured: for this purpose a thin spare diet chiefly if not totally vegetable, little Sleep, a free serous discharge from the Cutis promoted by moderate exercise; and a gentle excretion by the other passages as Urine & stool brought on by Laxatives properly & timely made use of.

We should be particularly careful how we practice Phlebotomy in this state of the body, as that discharge is always found to encrease the Plethora.

Thus we see how surprisingly quick a Plethora is brought on by this means in consumptions. —— Habitual Bleedings should with them be wholly laid aside, nor should that discharge take place to prevent a Plethora, (having an absolute contrary tendency) but to cure disorder arising from that state of the body as Inflammation, Hemorrhagy &c which it does merely by discharging a part & consequently lessening a part of the Blood.

Lecture 7th

On Obesity.

We shall now proceed to consider a state of the human body which is not much attended to, tho' when arrived to any great degree, not only becomes exceedingly troublesome, but is indeed productive of many very dangerous diseases.

This particular habit of the body is called Obesity.

A great degree of Obesity, will obstruct all the Animal functions, render the body dull and inactive, the senses less acute, and even impair the functions of the ~~body~~ mind as well as those of the body

And thus produce Epilepsy, Apoplexy, Asthma, Dropsy, putrid Fevers and many other diseases.

Some instances have been known of corpulent men, who have arrived at an amazing magnitude: thus a man have been found to weigh eight Cwt. & to have encreased eight feet in circumference; the cellular membrane being in some parts 10 or 12 Inches thick.

These are indeed very rare instances, but a much less degree of corpulency is sufficient to produce the bad consequences I have already ment.d

Sometimes the Fat will be accumulated to a very large quant.y in some particular parts of the body, while the rest remain free, & this circumstance is as yet wholly unaccountable.

Corpulency depends entirely on the habit: thus we cannot produce it some by any Medicine or Diet, or Regimen, whi~~ch~~le in other cases our attempts to retard its progress proves ineffectual: tho' it cannot be produced it may however be promoted greatly by animal food in general, particularly that which abounds with Fat, little exercise, indulgence in Sleep, Malt-liquors & a small quant.y of diluting fluids.

The English nation is more liable to this state of the body than all others as they eat a large

quant.y of Animal food, make use of Malt Liquors.

I know a Man now living at Chelmsford in Essex, who by a too free use of Animal food, Porter and other Malt-Liquors for near 15 years, became of so extraordinary a bulk as to render the least motion or exercise insupportable, at last he became Asthmatic to a great degree but without any diminution in the Bulk: this disorder increased to such a degree as greatly to endanger his Life: at that time a Clergy-man happening to see him advised him to read Carnaver's Treatise on Health & long life, which he lent him for that purpose. — The man having read it determined to follow the advices laid down by the noble Venetian forthwith; for which purpose he immediately began a diet composed of Bread & Eggs, prudently thinking it improper at first wholly to lay aside Animal food. — This method he contin. for some time with considerable advantage, but at last he entirely threw by the use of Animal food of all kinds, & persevered in the use of Biscuits & water alone, made up into a kind of Panada; by these means he has wholly retrieved his lost health & is now in reality a much younger man than he was five years since.

This Man's Case which will be published a few months hence in the next Volume of Medical Transactions is a plain proof that tho' in some cases

it is absolutely impossible to restrain this state of the Body within due bounds, yet in other a great deal may be done by proper diet. —

Another proof that it is the Diet of the people of this Country which subject them to this habit of Body and also how little quant.y of Animal food is sufficient to supply the wants of Nature may be derived from the Highlanders in Scotland; those people are perhaps as strong, active & hardy, & have as good natural sense as any people whatever, yet their constant food is Vegetable, consisting chiefly of Bread Oatmeal, Patatoes &c. with now & then a little Milk nor do they ever taste a Morsel of Animal food above once a month, when they think themselves daintily fed indeed.

From this then and a great number of Instances which I could mention, it appears that the food of a corpulent man should be Vegetables of all kinds & Water instead of Flesh, Porter & other viscid Foods.

There are several Medicines which have a power of destroying Fat, Amongst which Mercury is the most powerful; evacuating the Adeps in prodigious quantities, as may every day be observed in people under Salivation. — Boerhave considering how compleat an Antidote Mercury is to the Venereal Virus, and the great power of that Medicine in dissolving the Adeps would account for its action no other

way than by supposing the Adeps the seat of the disorder; this is however an absurd opinion.

Though Mercury is so powerful a dissolvent of Fat, yet it is by no means a Medicine fit to be used in such cases: since unless you continue the use of it which would be productive of bad consequences to the body in general, the Cells of the Membrana Adiposa which had been emptied by its uses would fill again in a short space. Soap also has been strongly recommended by some for this purpose, which others deny its having any such power; for my part however I must think it very probable, that the parts or materials of which Soap is composed, having a property of rendering Oils & animal Fats of all kinds miscible with Water, and thus to convey it out of the body, may have this property in a great degree.

Acids have also considerable power of diminishing the Fat in the body, but the quantity necessary to be taken for this intent, will be so large as to render their use dangerous.

Tobacco it is said has been tried with success, but if it was in reality this quality, it is so extremely nauseous as not to permit its use as a Medicine. —

On Sympathy

I shall now proceed to take notice of an affection of the body called Sympathy.

This is that affection by means of which one part of the body is affected by either painful or contrary sensations applied to another part: It is also by means of Sympathy that the passions of the mind affect the body. —

It is really astonishing how great connection there is between the mind and the body: when the mind is engaged in any tedious disagreeable pursuit, the Stomach will be affected with Flatulencies, Nauseas &c, which affection is called Hypochondrical. — Vomiting will be the consequence of a fractured Cranium. — When the Gout is on the extremities the pain leaves the Stomach, but returns, if the Gouty matter is repelled. — The stomach is affected with vomitings by obstructed Perspiration; by standing in the cold also. — Hemorrhages of the nose are stopd by the application of cold Iron to the Back. — Uterine Fluxes by the application of cold Water to the Abdomen.

How shall we account for the effects of these applications, unless by saying they occasion a contraction in the Vessels of the part to which they were applied, which contraction was continued by

by Sympathy to the Vessels from whence the Hemorrhage issued.

Harsh sounds operate by Sympathy on the Gums and Teeth: I have known a slight Hemorrhage flow from the Gums on hearing a Joiner whetting, or sharping the Teeth of his saw.

Strong lights will produce sneezing. A Stimulus applied to the membrane of the nose will produce Tears from the Eyes.

A vomiting is often occasioned by an inflamation of the Kidneys.—

How shall we account for the different effects of different kinds of Music on the body, unless by Sympathy.

All these instances evidently shew that there is a certain affinity or ~~affection~~ connection between the mind and the body, by which the different sensations of each produce an effect on the other; but what this affinity consists in is totally inexplicable; Mr. Monroe & others endeavoured to account for it by the course of the nerves; but they have not been so successful in their enquiries as could be wished.

Of Pathology

Having given a few lectures on Phisiology absolutely necessary & I hope sufficient to explain

the Phenomena which happen in the cure of
diseases, I shall now proceed to Pathology, or that part of Physic which treats of the diseases incident to the human body & their several symptoms.

A Disease, is the manifest interruption of the functions of the body and also sometimes of the Mind: i.e. can cure the Mind only when disturbed by the affection of the body, which diseases are distinguished by their causes.

Every Disease depends on a chain of causes, more or less Proximate. — Thus a Rheumatism is caused by a distention of the nervous Fibrillæ &c, yet that is only the proximate Cause; there being other Causes producing that Cause as obstructed Perspiration & Inflammation. — The accumulation of Water is indeed the Proximate cause of the Dropsy, but the cause of that accumulation is a relaxation. — The proximate cause or that cause immediately producing a Disease, is not solely to be attended to by a Physician, since the more remote causes, very often demand a differant treatment. — Thus a Dropsy may be remotely caused either by obstructed perspiration or suppressed Catamenia: hence then the Indications of cure will be extremely differant; in the former diaphoretics, in the latter Deobstruents being necessary. —

Causes may be either peculiar and essential, or general. — Thus the general cause of an Hemorrhage may be a Plethora, but the more peculiar or essential cause is the rupture of the Vessel.

An occasional cause affects the body when the latter is predisposed by some other cause. — Thus a Plethoric person on being exposed to the Cold may have an Hemorrhage at the nose. — But a man of a different Temperament living in the same circumstances will have no such symptom.

Some occasional causes are more general than others. — Thus if you thrust a Pin an occasional cause into the Flesh of a man's arm, he will always have the same sensation if you were to repeat it fifty times; but apply the Variolous matter of the Small Pox to a number of Patients & you will find that some will recieve the infection, while others will be no ~~wise~~ ways affected. — In the former cause the body is equally disposed to recieve the effect; whereas in the latter it is sometimes adapted, sometimes not.

A Symptom is any Phenomenon in the Animal Oeconomy, which does not appear during health. — It is obvious, as a Cough pain in the Side, difficulty of breathing are symptoms of a Pleurisy.

A Disease is a combination of

symptoms; some of which proceed from the Disease itself; others from the cause; and others again are symptoms of Symptoms. To instance this in a Pleurisy. — The pain in the side, Fever, Cough, difficulty of Respiration are symptoms attending this Disorder. — The first is the Characteristic symptom of the Disease: the fever and the Cough are only symptoms of the Cause of Inflam^{n}, which might have effected the throat & produced Angina instead of Pleurisy. — Difficult respiration is a symptom of symptoms, it being caused only by the Inflammation of the Pleura, which causes such intense pain as to prevent the free action of the Lungs. — Thus then it is a symptom of Symptoms (the Pain) there being no Obstruction in the Organs of Respiration themselves as there is in a Peripneumony, in which disorder it a characteristic symptom of the Disease.

It is also of the utmost consequence to distinguish characteristic symptoms from those that are merely accidental. — Thus an Epilepsy being caused by a Plethora or accumulation of Blood in the Vessels of the head, may cause an Hemorrhage at the nose: yet no person would say it was a symptom of Epilepsy.

Another Division of Symptoms is into Active & Passive. — An Active symptom is that

by which the Disease is thrown off, as a critical sweat, Diarrhea, Vomiting & by that means expelling Poison taken into the Stomach: on the contrary the latter is only the effect of the Disorder itself not tending to throw it off, but rather to encrease it. — Thus Vomiting in Inflamn. of the Kidneys – passive symptoms. —

Lecture 8th

On Poisons

It is extremely difficult to distinguish Poisons from Medicines, since many of the latter act as poisons on an encreased Dose, as Opium, Camphor &c, and indeed this inconveniency is almost always attendant on the uses of Medicines of considerable efficacy, I will therefore endeavour to distinguish them by describing such substances only as poisons, which act as such in small doses.

Poisons may be distinguished as nervous & inflamatory; as acting on the Nerves only, & hence producing Spasms or convulsions, or on the Blood; whence proceed Pain, Tension, Mortification & Death.

Among the first class may be ranked the Bites of Venemous & mad Animals, Opium, Nar-

-ious Vapours & Exhalations from the Earth:—
and in the second Arsenic, Corrosive sublimate &c. Those which are called Mechanical Poisons & act by their peculiar shape & construction of their Particles, thus producing deadly effects may properly be ranked in the latter Class.

We will first consider those of the first class in which are included the Narcotic Vegetables.

The Poison of the Viper seems to affect us only by the Bite of that Animal, since the whole body of it has been taken into the Stomach without producing any effects.— The Bite is immediately succeeded by an acute pain in ye part affected; Tumour, circumscribed inflamation, low intermitting Pulse, Sickness, & Vomiting of a Bilious Matter, yellowness of the Skin, Hiccup, Palpitations, cold sweats, & Death closes the scene within a short time.— Most of these symptoms seem to arise from a Spasmodic contraction of the Biliary Ducts, as a vomiting up of bilious matter at first, but on a more compleat contraction, the Bile is forced back into the Blood & thus produces the Yellowness of the Skin: The manner in which this Poison acts has been a disputed Point; we shall not pretend to Determine it being sufficient for our purpose that we know its effects; we will therefore proceed

6. the method of cure.

(Cure) Immediate Suction may be first had recourse to, as it is not only of extreme service, but may also be practiced with safety, — There being certainly a property in the Saliva of obviating the effects of many Poisons. — Animal Fat blunts the Poison & corrects in this case remarkably: — The Fat of the Animal itself has been strongly recommended as superiorly efficatious in Virtues to all other Fats: for my own part however I make no doubt that the Fat of any other Animal will be attended with equal advantages.

Swallowing the Animal that made is also strongly recommended by some; from this however nothing can be expected, unless indeed the patient is prejudiced in its favour & thinks it the only means of preserving his Life; in many such cases it is highly necessary to keep the mind at ease by this or the like practices, as they can possibly do no harm & indeed many cures have been performed by these means, however surprising it may appear. — Sp. Corn: Cerv: is many times given in this case but I have never practiced it, nor can I vouch for its success. — I cannot however imagine but, (unless it contains a peculiar Specific Quality to counteract the poison) that it must be

highly detrimental, by producing irritation and
Inflammation.

Mercury seems to be the most general & universal antidote against Poisons of all kinds: we should therefore in these cases administer it internally & use it externally, by friction mostly on the part that was bit.

Sineka is given with very great success in Armenia which it principally effects by promoting the Serous Secretions in general, and more particularly by producing a diaphoresis and indeed those Medicines that produce this discharge witht. creating Inflammation will be advisable.

The wound given by the *Bite of a Mad Dog*, puts on the same appearance & heals as readily as that given by the Animal when in health.

The disorder in consequence of it makes its appearance at different distances of times, according to the temperament & season of the Year; sometimes appearing in a few days but oftener in a few weeks, & it is sometimes known to lie dorment in the constitution for many months and even years.

The first symptom is an acute pain in, or near the wounded part, lassitude, Anxiety, Pensiveness, dejection of Spirits and

increased degree of irritability, tremors, nausea, sickness, a great thirst and ardent desire of drinking, yet a total incapacity of swallowing & ~~swallowing~~ liquids of any kind; a spasmodic contraction of the Oesophagus coming on the application of a liquid to the lips, nay, often at the very sight of it at a distance, accompan.d with a great seeming dread and horror, hence this symptom is denominated Hydrophobia. This symptom however does not always attend canine Madness, therefore tho' it should not appear it should not be thought another disorder, if other circumstances & symptoms should corroborate and confirm the Opinion.

When the patient views himself in a Glass, the same dread and horror is produced: he is for the most part sensible through the whole course of the disorder, tho' sometimes to a great degree delirious, spitting out a large quantity of frothy matter at the by-standers.

The Modus Operandi of this Poison is not so easily accounted for; let it therefore suffice that we know the most probable methods of cure. For this purpose it is the business of the Physician 1st to endeavour to prevent the

the disorder, by means put in practice immed.^{y} after the Bite; 2.dly to cure it when approached.

Many Panaceas have been cried up as Specifics against this disorder, but they are alike uncertain & fallacious & have uniformly ceased to be valuable, on their ceasing to be a secret.

The first thing to be done is to encourage a discharge from the Wound by enlarging it; by applying cupping Glasses and other Stimulants to it & thus giving a chance for the discharge of the Venom.

Mercurial Unguents should then be rubbed in large quantity on the wound and near it, and if the quantity used be so considerable as to raise a Salivation it will be of service.

The *Cold Bath* may be used with great advantage as it produces a considerable shock, not only to the body but to the mind also, thereby diminishing irritability, strengthening the Solids and procuring a glow of heat.

Bleeding has been almost universally practiced on a supposition that the ill consequences proceeded from Inflamation, & I believe has not seldom been of great advantage, since it tends by diminishing the quant.^{y} of Blood to produce a greater degree of irritability, if the patient is not

Plethoric, in which case indeed it will be of service and should undoubtedly be practiced.

These means are to be pursued in order to *prevent* the disorder, *but when it has already come on* a different treatment is required.

Here we should exhibit *Opium* as an Antispasmodic, in very large & frequent doses, & it is indeed astonishing what quantities of this Drug may be used without producing its effects; the only objection to its use is, that if it does not produce an immediate good effect, it will increase the disorder, by rendering the Body more relaxed & consequently more irritable, thus disposing the Habit to a greater susceptibility of the ensueing Spasms; for it is observed that people of a relaxed & extremely irritable Disposition are more subject to the attack of this disorder, the Hydrophobia coming on much sooner than those of a more tense fibre.

The *Semicupium* used immediately on the access of the Spasm has been attended with success by shortening its duration & abating its violence. —

This Disease is with great propriety ranked among the nervous & convulsive sorts: on considering it in this light *Musk* & *Cinnaber* have been almost universally made use off. — The *Musk* I believe is an excellent Antispasmodic, but it

should not be exhibited in such small doses as is often the Practice: it acts as a Diaphoretic when used in larger quantities but its effects are scarcely perceivable unless the dose is a scruple & it should never be used in less quantity in any disorder, and in this case it should be doubled. *Cinnabar* can be of little or no service, since the powers of the Mercury are either entirely destroyed by the Sulphur in its composition.

Narcotic Vegetables are another Class of Nervous poisons:— to this Class belong Opium, Hemlock, Henbane, Nightshade, Aconitum and the like.

All poisons belonging to this Class produce their effects by destroying all sense and irritability.

Opium, produces nausea & vomitg; soon after it is taken into the Stomach, the memory fails, a difficult Respiration comes on; the Pupils of the Eyes dilated, Apoplectic symptoms and cold sweats ensue, and Death speedily follows.—

The nausea & vomiting should be by all means encouraged by *an Emetic* *as soon as possible*, which should be of *the most powerful kind*; as the Stomach is deprived of its natural irritability, to so great a degree as to render it insensible to the operation of those of milder Qualities.

Acids of all kinds, particularly Vegetable Acids, will be attended with advantage, as they tend to Stimulate the Nervous Fibrillæ.

If the Emetics do not produce a stool Cathartics should be given.

Camphor is a Poison of the narcotic Species, if taken in too great quantity: Mr. Alexander of Edinburgh tried the effects of this Drug on himself, and found that very alarming symptoms came on, Diſsineſs, Nausea, Loſs of Memory & convulsions within a short time. — A Physician was sent for who gave him a Vomit or two, which brought him to his senses, this Cure was compleated by taking a large quantity of Vegetable Acids, as Oranges &c.

Gangrenous Effluvia are poisons probably of the nervous kind, since Inflammation apparently is not the cause; a Sphacelus frequently comeing on even in a Plethoric person without considerable inflam.y symptoms preceeding; and also many exceſsively violent Inflammations resolving without Gangrene. — Another circumstance seeming to prove Gangrenous Effluvia are a nervous poison, is the pain in the head which many Surgeons complain of after dressing a

Sphacelated part.

The Fumes of Charcoal produce the most violent effects by destroying the Elasticity of the air, which renders it unfit to distend the Lungs.

This Doctrine is corroborated by Observations as, they produce no ill effect, if applied only to the external Superficies of the Body, contrary to the known effects of Opium & most other poisons.

The Actions of corrosive poisons, as Arsenic, Corrosive sublimates &c depend upon a chymical combination, & produce their effects on the Stomach's of Animals as Caustic's, which bring on Inflammation, Mortification & Death within a few hours.

When these Poisons are taken into the Stomach, the intention of Medicine &c. should be to remove the causes, and prevent or retard its Operation. — Both these intentions are answerd by immediate Vomiting with warm water & oil. Alkaline Salts as they have a power of dissolving the Chymical combination, on which the powers of this Class of poisons depends, more especially ^x^ Corrosive Sublimate, should be used freely, nor would it be amiss if they were mixed with the warm Water and Oil. Arsenic is the poison mostly used

is an acid —

by Lunatics to put an end to their lives; it is then not a little incumbent on a Physician to know the true Characteristic of this mineral, by which it may be known, as it is often required in a Court of Judicature.

There are two methods by which Arsenic may be known; one is, if you put any quantity of it on a red hot Iron, it will evaporate a fumes which very much resembles Garlick:— the other is by getting a little of it between two pieces of Copper, and throwing it into the Fire, when both the pieces will assume a white colour.— This forms a base Metal much used in the manufacture of Spoons, Buckles &c.

Lecture 9th

On the general Division of Diseases.

Diseases may be divided into Idiopathic, or Symp~~athe~~tomatic.

A Disease is said to be Idiopathic when the cause of the disorder is situated in the part affected; as for instance, when poison is taken into the Stomach, the Vomiting which ensues is an Idiopathic Disease:— on the contrary if the Vomit.

proceeds from a fractured Cranium, Worms in ye Intestines, an inflamed Kidney, or some other remote causes, it is then a *Symptomatic* disorder.

This Division is of the greatest use in practice, as a just distinction between the *original Disease* & its *Symptoms* will almost always point out the *true cause* of the disease & consequently the Indications of cure.

Another Division of Diseases is into *contagious* and those which *are not so*: thus any Disease brought on by contact is called contagious, as the Small-Pox.

Diseases are also divided into *Epidemic* & *Endemic*. — A Disease is said to be Epidemic, when it is not confined to any particular Spot, but rages over a whole Kingdom, Province or the like. — Thus the Fever which raged all over Europe some years since & could be traced from Country to Country, was Epidemic. — Whereas the Plague at London a century since, the Cholica Pictonum &c are Endemical Disorders, because they confine themselves to one particular Spot.

Another very useful Division of Diseases is into *the mild* & *malignant*; as in the various species of the Small-Pox. —

Disorders are also Divided into those which are hereditary & those which are not. - This is an useful distinction, since an hereditary disease being more firmly rooted into the constitution, will require more powerful means, than if it be only adventitious.

Into Salutary & Critical, and the contrary. - Thus an Hemorrhage owing to Plethora will be of service; whereas if it arose from putridity the most dangerous consequences might be apprehended. - This shews the necessity of this Division, since the methods of cure are so entirely different.

Into Vernal & Autumnal. - This distinction is made by Sydenham, who also attended to it very strictly during his practice. Fevers of various kinds, particularly intermittents, will require a different treatment in the Autumn than they do in the Spring: In the Spring an Intermitt^{t}. is of an inflamm^{y}. tendency, requiring the antiphlogistic treatment: whereas a cordial stimulating course of Medicines & a more free use of Bark is absolutely necessary to subdue the putrid state of the Autumnal.

The distinction of diseases is by

far more serviceable in warmer climates than in England, because their Summer being more sultry, a Fever comming on in the Autumn never fails to partake of putridity.

Another distinction of Diseases, which I make, & which think is more useful in Practice than any, is into those accomp. with Fever, and those which are not.

Having now ennumerated the various Divisions of Diseases, which may be of use to the right understanding the follow.g Lectures: we will now proceed to describe the different Diseases themselves, & shall first speak of Fever, as being the most general & even the Basis of most others.

Of Fevers in general.

Some have imagined a quick Pulse to be the true characteristic of Fever; & indeed I will so far agree with them as to say there can be no fever without a quick Pulse; but it does not follow from hence that this Symptom never occurs without a Fever, nor is it really the case, as we can accelerate the Pulse by artificial means,

as various Medicines, Exercise, &c without producing Fever.

A sensation of Cold on the Superficies of the body, Rigor, great lassitude, & Prostration of strength at first, and a great heat & strong quick Pulse at the height of the Disorder, are the true Pathognomonic signs of Fever.

A Fever then begins at first with Lassitude, Weakness, Horripilatio, Rigor, Tremor, Paleness of the extremities, difficult breathing, Anxiety, Nausea, Vomiting, small quick Pulse, prostration of strength, Urine crude & thin: — these symptoms are succeeded by heat, considerable thirst, Head-Ach, & perhaps Delirium. —— If the Fever terminates happily, the foregoing symptoms are relieved by the follow.g; an easy gentle Diaphoresis, a full soft Pulse, which shews a freer circulation & the Urine frequently deposits a sediment.

I would not have you think that all these symptoms occur in every Fever; I mean only to say that it is accomp.d by a greater or less number of them: each of the foregoing symptoms will be more or less violent according to the Habit & constitution of the patient: the coldness or

Horripilatio for instance will be scarcely perceptible in some, whereas in others, it will be contin.d & excessive.

Besides the symptoms already ment.d, there are many others occur in fevers, as Diarrhea, profuse sweating, Convulsions, Subsultus Tendinum, Coma, Haemorrhage, Watchfulness, Singultus &c. —

The causes of Fever are many & various, and operated differently on different constitutions. The external application of cold, accompanied with moisture, more especially if it be sudden, which by stopping perspiration & occasioning a retention of other secretions, stimulate from their acrimony & produce fever. — Cold is divided into absolute & relative: the former is at all times the same & its degrees are measured by the Thermometer: the latter depends entirely on the animal heat, which is the same in all countries, hot as well as cold: this is demonstrated by the Thermometer: apply this Instrument to the body in a cold wintry atmosphere, and you'l find the Quicksilver rise: this is a very common experiment and well known, which shews a greater warmth in the body than in the surrounding atmosphere: but experiments

of the same nature made in the West Indies prove that the Animal heat is less there than in the surrounding Atmosphere, since if you put the extremity of the Instrument into ye mouth, the contents of it will fall considerably.

Tho' the animal Heat will be the same all over the world, yet a greater degree of heat or cold than usual applied externally will produce considerable changes ~~internally~~ in the constitution.

Thus Heat opens the pores of the Skin & produces a more plentiful secretion from the part: it relaxes the whole system, rendering it more subject to irritation: hence menstruation of women begins at an earlier period in warm countries, than in these parts; consequently they become sooner marriageable: hence also Hysteric disorders are much more frequent there than here.

Cold applied externally stops perspiration, renders the body more firm & strong, of a tense fibre, consequently abates irritability:— hence nervous diseases are less frequent in cold Countries, and Menstruation comes on late and in small quantities; nay, it is confidently asserted that the women of Lapland do not menstruate at all.

Cold then is relative when applied in a greater degree than the external parts are in a proper state to recieve. Thus if you shut a man who has been inured to a very great degree of Cold into a very warm room, his perspiratory vessels will be relaxed & the Sanctorian Perspiration be excreted in greater quantity; but take him from thence into a Room by many degrees less cold than the Atmosphere he had been used to, and he will immediately perceive a very great degree of relative cold, which, will occasion a contraction of the cutaneous Vessels, stops the secretion & circulation through them: this Rigor on the external parts returns the Blood in less time to the Heart; which it excites to quicker & stronger contractions, which constitute the more frequently common in all Fevers.

In the summer if the Heat of the Atmosphere is below 56 Degrees by Farenheit's Thermometer, a degree of relative Cold is felt, rendering the Atmosphere uncomfortable. When it is at 64, the atmosphere is then warm comfortable and refreshing.

Strong persons are less liable to Cold than weak, whose habits are more subject to Irritation & the effects of it will be very different. Cold

affecting a Man of a strong tense fibre produces Inflamation, but when applied to a person of a delicate Habit & weak irritable fibre, the consequence is fever of a Putrid nervous kind: this observation holds good not only on this Northern Latitude but also in the warmer Climates

The more sudden the Application of Cold the more violent will the effects be & give a greater shock to the Constitution. — Thus we find how great a Rigor is produced by plunging into Cold Water, whereas if the patient is permitted to go in gradually, the effects of the Cold on the Solids will not be half so much.

If cold is introduced by continual Stream upon any particular part of the body, its effects will be greater & principally affect the part to which it was applied. — Thus Cold Air coming in thro' the Chink of a Door or Window against a persons neck, will produce Angina.

Cold accompanied with Moisture produce greater effect.

The Constitution is more susceptible of cold when the Stomach is empty, or during any evacuation or Secretion, as Diarrhea, Perspiration &c.

Lecture 10th

On Fevers in general. contd

In our preceeding Lecture we consider'd the effects of Cold as producing Fever; we shall now proceed to enumerate other causes.

Putrid effluvia brought in contact with the body are extremely apt to produce Fevers of the Putrid kind as is the Case in Jails, Hospitals, Fleets & Armies; Dissections also are very apt to produce these Fevers.

These effluvia in hale strong persons produce symptoms very like those of a Fever of the inflam.y kind, which often induce us to Bleed, but we are soon informed of an error by the sinking of the Pulse, and the general alteration for the worse.

Inhabitants of warm Climates are more subject to Fever of this kind than others, it being the property of a certain degree of heat to generate Putrefaction.

Animal food also contributes to produce certain disorders; in Scotland where their Diet is chiefly vegetable the Fevers are all of the inflam.y ~~kind~~ Diathesis.

Putrid disorders are much more

violent when the effluvia occasioning them, arise from a moist state of the earth, than when the noxious Vapours proceed from a corrupted & stagnated Water. This is exactly the case with river Nile in Egypt when it overflows its Banks its water becomes stagnant for sometimes & corrupted, without producing any bad effect; but when they retire to their proper Channel leaving the country covered with Mud, which continues moist along while, putrid distempers then becomes Universal & violent.

Contagion which depends on a kind of Miasmata floating in the air, produces Fevers mostly of the Putrid kind as the Plagues, Small Pox & the like.

Fear by weakening the body, renders it more susceptable of contagion of all kinds; and indeed it is a common observation that those who are most afraid of the small Pox & contagious Disorders are more liable to its attack, and generally fare the worse under it: Van Swieten tells us of a Lady who was seized with an obstinate quartan Ague, at the sight of a Rat only; such power has fear of rendering the body more irritable & susceptable of these disorders.

Cold has a power of checking Contagion of all kinds: hence a contagious disorder

which raged violently during the Autumn, will be dormant all the Winter & break out again in the Spring. — Hence it happens that Vernal Intermittents partake most of the Inflamm.y & the Autumnal of the Putrid Diathesis, & hence also we derive such signal advantages from the cool Regimen in the treatment of the Small Pox.

Most Vegetable & Mineral Acids are found to be capable of destroying *Putrid Miasmata*: Fumes of Sulphur are particularly serviceable; a particular instance of this is well worth relating: all the Crews of the Ships belonging to Admiral Boscowins Fleet, were greatly affected with a Putrid Disorder when they fell in with, engaged & defeated Mons.r de la Clue's Squadron, but it then immediately ceased, and did not appear among them afterwards; which was then attributed to the acid Fumes of the Sulphur in the Composition of the Gun-Powder.

Mercury is an Antidote to contagious Putridity of all kinds. — Thus we find that the foul Wards of an Hospital abounds with moist warm stagnating Air, the most common cause of Putrid Disorders, yet neither the patients themselves, nor those who attend them are ever

affected with them. Those also who have taken Mercury by way of Preparation in general, I believe I might say always, have the small Pox mild & few.

Having now considered the different causes of Fevers in general; we will proceed to enumerate the symptoms, and distinguish those which are mild & salutary, from the threatening & fatal: it will however be necessary to premise, that *all Fevers* consists of three stages or Fits; as the *Cold*, the Hot & the perspirable, and that all *Fevers* are in the opinion of the most eminent Men, *Remittant*; the intervals being only so short & transitory as not to be taken notice of in any of them. A *Facies Hyppocratica*, *dry Skin*, *Eyes fixed in the head*, *contracted Temples* are always *bad* symptoms & denote the violence of the Fever. — A *red Face*, *prominent* & *inflamed Eyes*, attended with a *wildness* as it were, and *throbbing* of the Carotids are *dangerous* symptoms & generally precede *Delirium*. *Pain* on the least degree of light or noise, Eyes *fixt* & *immoveable* or half shut, the lids being at the same time convulsed; portend *great danger*. *Eruptions* about the *mouth* and superior part of the body, may be considered as critical, if at the same time the Fever abates, but if on the other hand they succeed the use

of hot Spicy Medicines, profuse sweating & dry mouth, they are in general very unfavorable. — A Tremor of the Lips, faltering of the Speech, livid Aptha, and difficult swallowing, are likewise of bad omen. — A Dry rough parched tongue, with a black Crust on it, pain in the head, Watchfulness, Stupor & Delirium, are exceedingly Dangerous symptoms. — A Delirium attended with a Stupor & Drowsiness is much more dangerous, than when accompanied with Maniacal Fury. — Convulsions supervening Hemorrhage, or any other profuse evacuation at the decline of a Fever, very often proves fatal. — Pain of the Head, Deafness, and great fear of Death, often kill. — We have instances where fever has even alter'd the Colour of the Hair in the space of 24 hours. — A Hiccup, contracted, frequent, small, or intermitting Pulse, point out the greatest degree of danger. — A frequent sighing, Anxiety, & difficult Respiration, denote the great difficulty with which the Blood is circulated thro' the Lungs, consequently those symptoms are bad. — All Fevers increase towards night; we are not therefore to be alarmed on that score. — Subsultus Tendinum, dry Skin, cold Extremities, Abdomen swoln & tense as if Air was contained in it are very bad symptoms, more especially if they occur in fevers of the putrid kind. — Nausea & Reachings in the beginning of Fevers is not a bad symptom, as it

indicates the use of Emetics, by which we often cut short the duration of the Disorder. — *Moderate discharges* by *Stool*, especially if bilious, are serviceable, but if copious, *involuntary*, *putrid*, black & fætid they argue the greatest danger & malignity, especially if the Urine be high coloured or black, or tinctured with Blood. — *Moderate sweats*, with the *Urine turbid* & depositing a *Sediment*, are very *Salutary signs*. — Rigor during the heat of a Fever is very bad as it indicates suppuration in one part or another — *Pain* in the *Back*, often owing to hard Fæces in the Colon may be removed by Glysters. Fevers terminate in seven, Eleven, fourteen, Sixteen or twenty one Days; this was long ago observed by Hippocrates & lately again by Dr. Cleghorne, in his Book intituled the Diseases of Minorca, which Climate is similar to Greece. —

Lecture 11th

On Fevers in general (continued)

Having enumerated the causes and described the various symptoms incident in general to Fevers, it remains now to say something on the proper method of cures; & this I intend to do in the following Lectures.

In the course of Fevers we are to consider the causes, the constitution of the Patient, and the present state of the Atmosphere.

The Powers of Nature should not be suffered to be too violent, nor too *languid*; it being the

Physicians place to regulate her efforts so as to produce a good Effect; hence it is that Dr. Sydenham calls a Physician the Servt. of Nature.

The first indication in the cure of Fevers, are Evacuations of some kind or other: in Plethoric, hale strong Habits, when the symptoms run high, with full strong Pulse, Bleeding will be proper, to lessen the impetus of the Blood, and thus regulate the Operations of Nature; and the advantage of this evacuation will be greater, if it be sudden & from a large orifice. —

When we have any reason to expect a Putrid Cause, we should during the Operation, examine the Pulse, which if we find low, quick, and the patient faint & languid, it will be proper to stay your hand. — Emptying the Primæ Viæ will be necessary in all Fevers; as Crudities collected there, often cause, & always encrease the Disease: Ipecacuanha joined with Tart: Emet; will ansr. the purpose, better than any other; as the latter besides its Emetic quality, generally produces a stool likewise; a very desireable circumstance.

Evacuations by Stool are to be procured by means of Glysters rather than Laxatives taken by the mouth, having greater advantages attending their use; Laxatives do not always stay in the Stomach, but if they do they always create great

uneasiness & Nausea, which inconveniencies are avoided by using Glysters; another advantage attending them also is, that they act as fomentations to the Intestines and parts adjacent, which are often primarily affected. — The finer aqueous parts of Glysters are taken up by Absorbents and carried into the circulation, producing all the effects of Diluents.

As nature endeavours to throw off & expel the noxious Fumes generally by sweat; it then is our Business to promote this Discharge; × those Fevers in particular arising from an obstructed Perspiration from Cold, are generally terminated by this excretion. This indication may be answd by a few slight Diaphoretics, as the Haust: Salina, Sp. Minderer. &c. —

The general Intentions of Cure of Inflam.y fevers are three, besides V.S: — as to empty the Primæ Viæ, by Emetic & Stool, and to promote a Diaphoresis: all these three intentions are to be answerd by a single Medicine, Antimony, which has a power of checking these Disorders remarkably: the best preparation of this Mineral is the Tartar Emetic, being least liable to produce bad effects, and its action, & its action more determinable: thus if you require its Operation only as an Emetic

it will fully answer your purposes if given a Solution: if a stool is required also, the best method of exhibiting it is by Pill, but if you require its Diaphoretic Quality it should be given in small doses & repeated pro re nata.

Tartar Emetic is by much more uniform & consistent in its Operation than any other Antimonial preparation. Dr James's Powder, so much celebrated in the cure of Fevers, is a preparation of Antimony; but it is such a preparation as will not produce its effects till it has been combined with an Acid; for this reason it is that its action is so very different in different constitutions, because it depends entirely on the quant.y of Acid it meets with in the Stomach. — The Tart: Emetic on the contrary is already combined wth a proper quant.y of Acid, and consequently its Operation cannot be altered by any quant.y of Acid it meets wth in the Stomach, and must be more regular & uniform.

A Powder very similar, if not equal in effect to Dr James's may be made by calcining Ant: crud: Pulv: subtilissim: ʒvii Nitr: crud: Pulv: ʒv together in a Crucible.

After sweating has been promoted by the Antimonial, it will be necessary to keep it up by repeating a smaller quant.y at proper intervals, by administering the Saline Draughts.

During the whole continuation of the Disorder a plentiful Dilution should be used, consisting of the most mild & Demulcent Fluids, as Barley Water, Baum Tea, Decoctions of Rice or Bread, Water acidulated with Succ: Lim: or the like: — to these if the Pulse flags, and it be proper to keep up the Vis Vitæ, Wines may be added, it being one of the best of Cordials.

If you use Dr. James's Powder or any other calcined Preparation of Antimony, it may be neceſsary to observe that no acid is used during its Operation, as it will become so much the more Auſtere & violent.

If towards the decline of the Fever the Patient be much reduced and the Pulse weak & low; Cordials will become neceſsary to support the Vis Vitæ; for this purpose Wine is the best Cordial that can be obtaind: Castor & Saffron are often given in this Case, but if they are any way to be depended on their doses ought to be greatly encreased.

When the Patient is exceſsive low and a Subsultus Tendinum with a kind of muttering Delirium come on, then Musk & Camphor will be of great service; but to produce an effect, their doses must be larger than is commonly given. — The Julep. e Camphorâ of the London Pharmacopeiâ is

far from being an elegant method of exhibiting this Drug, as the Water cannot be sufficiently impregnated with its Virtues; the best way of giving it is by rubbing it to a Powder with the addition of a little Spt: Vin: Rect: & making it into a Bolus with some Conserve.

Besides the Symptoms already mentioned & treated of as occurring in Fevers there are several others.

A Diarrhea arises from several causes: if from acrimony of the Contents of the Intestines it proves critical: if from an obstructed perspiration, when the matter is thrown on the Intestines; it should not be checked, if it seems to produce good effects & the Pulse don't flag; but if it weakens the patient without proving critical, its progress should be stopt by Rhubarb & Ipecacuanha: the latter cleansing the Stomach & producing a tendency to a Diaphoresis, while the carries off the acrid stimulating Contents of the Intestines.

But if notwithstanding these Remedies a colliquative looseness should come on in the decline of the Fever, so much as to be really alarming, recourse must be had to the most powerful astringents, as Confect: Cardi:– Plesiac: Lond:– Opium,– Conf: Paulin:, Elect: e Scord:

Read: Serpent: &c

Miliary Eruptions that follow gentle sweats & which seem to relieve the Patient are Salutary, and should be encouraged if possible, tho' not by heating Cordial Medicines, but by the use of the Saline Draughts & thin diluting Liquors: but if on the contrary they subside soon after their eruption and the patient becomes evidently worse, a difficulty of breathing comeing on with Delirium &c. — immediate recourse must be had to Blisters, Cordials and the like. — The best parts to apply the Blisters will be to the back & legs.

Petechiæ will often attend the Decline of a Fever originally inflam.y, accompanied with fœtid Breath & Stools. — These symptoms argue Putrefaction, and the necessity of the most speedy and effectual Remedies being put in Practice: the Bark of all Medicines is the best adapted to this purpose & will fully answer every intention, besides it often happens that these disorders are attended with Remissions, in which case this Medicine will be more strongly indicated, and the longer and more apparent they are, the better effect will the Bark have: it will render them more apparent, stop profuse sweating, (which answers no other

intention then to weaken the Patient) & correct the putrid acrimony.

Watchfulness, is a very common symptom in Fevers, and when accompanied wth Head-ach & red inflamed Eyes, is frequently relievd by the application of Leeches to the temples & Cupping Glasses to the Head.

We can often discover by the Tunics of the Eye whether the Brain is inflamed.

Opiates must by no means be given in inflammations of the Brain, as they tend to increase the Disorder; but rather Camphor in large Doses, as it produces admirable effects without heatg the body or in increasing the inflammation. - The Sal: Sedativ: Homberg: & Nitre, will in this Case be of great use if the Stomach will bear them.

When at the decline of Fevers, a great fainting, sinking and lowness of ye Pulse supervenes, Blisters, Sinapisms, and other Stimulants will be of the greatest uses. - The Habit is sometimes so reduced as not to bear well even the discharge from a Blister, the latter will then be the best applications, as they produce the same effect of raising the Pulse by their Irr=itation, and are not subject to the inconveniency

+ The second or more alarming, is that in which the Patient talks incoherently when awake and does not ansr. readily when spoke to:

of large Vesications and discharges incident to the former.

A Watchfulness & Delirium is frequently owing to a collection of acrid Sordes in the Stomach, if you have any reason to think this the Case, an Emetic will prove most serviceable.

Convulsions & Subsultus Tendin.m generally attend the Close of Nervous Fevers; which argue an affection of the Brain and its Appendages: in this Case Musk, Camphor & other Cordial Medicines are strongly indicated & should be freely used.

The Diet of Patients labouring under fevers should be moderate, light, easy of Digestion, and in general of the Antiphlogistic kind; roasted Apples Panada either with or with.t Wine, Decoction of Rice, Barley, Bread &c: Herb Tea's very often Nauseate, always weary the Appetite: this should be attended & care taken to change the form of Diluents in such a manner as not to Cloy the Stomach. — The Diluent which I have observed to cloy the least is a Decoction of Bread or Biscuit in Water, to which Sugar, Lemon, & Wine if allowable, may be added.

At the time of Recovery we should

particularly attend to the Diet of the Patient, as the Appetite being quite recovered & rather voracious he will be very apt to indulge himself to excess & the Fever thereby be again renewed; to prevent this circumstance taking place it will be necessary to give a few doses of Rhubarb at proper Intervals in order to keep the body open and carry off any acrimonious Matter collected in the Intestines: as he recovers, he may eat the lighter Animal Food, Chicken, Veal & other White Meats. — Air, Exercise & the use of the Cortex will greatly contribute to the Recovery of his ~~Health~~ Strength.

Lecture 12th

The Acute inflam^{ry} Fever

The symptoms are generally frequent Chills succeeded by flushes of heat, a sense of lassitude and oppression in the head, Back and Loins; the Urine high coloured and in the beginning, does not deposit a Sediment; the breathing is laborious and the body costive, the tongue in the beginning is moist and white, and afterwards it becomes darker & dryer and in the end is Brown, nearly the colour of toasted Bread, Watchings

with an inflamed appearance of the Tunica Conjunctiva of the Eye, and the Blood then drawn & examined has an inflam^y appearance: The general fulness in this Fever, is followed with an universal "pain in the Bones", as the patients express themselves. — Later the tongue & lips are cover'd with a Putrid Sordes, Subsultus Tendinum & Delirium comes on; the Stools are frequent & fœtid, & voided involuntary; and in the end the patient dies generally convulsed. This fever is distinguished from others by the hard full Pulse, intense heat upon the Skin, violent pain in the Back, White tongue & costiveness, Delirium with inflamed Eyes & flush'd Face.

Nature affords relief by various evacuations, as sweating, Urines, Hemorrhages from different parts, Diarrhea & abcess. When the disorder has been run on beyond the seventh Day, it changes its appearance from inflam^y, to that of one more Putrid & of great malignity, as nature cannot protract the inflam^y Disease much longer.

Its critical symptoms are always preceded by an increase of inflam^y symptoms & generally happen the morning after a bad night.

Symptoms of the Brain being affected early are inflamed Eyes, flushed count=

cenance dry tongue without thirst, pale Urine, change of the Voice &c. — These are very alarming symptoms and often fatal. — If the Urine changes to the Colour of Coffee-grounds it is a sign of approaching Putrefaction.

I have known this Fever terminate the seventh or eighth Day by a compleat Jaundice diffused over the whole body.

Beyond the 14th Day there is seldom any critical Evacuation: the patient falls asleep & awakes much better, which is generally all the Crisis that happens after that time.

At the first attack of an Inflamm^y Fever where the head is much affected an Hæmorrhage coming on from the nose will afford more relief than if we were to take twice the quantity ~~by~~ from the Arm.

If sweating in all Fevers does not relieve in 24 hours, it is supposed after that time, only to weaken the patient, hence other evacuations must be had recourse to. — It is not the quantity of sweat that relieves in the early stages of Fevers, but the softness upon the skin &c: such profuse discharges ought not to be encouraged by the Bed Cloaths.

This Fever is often serviceable to nervous Patients & those labouring under Visceral obstructions, Gouty & other Chronic Diseases;

whilst the nervous & Putrid ~~Diseases~~ Fevers often do the constitution the greatest injury

(Cause)

This is particularly the Fever of Youth; those enjoying the best health & the Plethoric, are the most subject to it: — sudden exposition to cold will check the perspiration, and then the cold being repeatd. before the Perspiration is restored, is the most common cause of it. — Eruptions repelled from the Skin, or a neglect of accustomed discharges, as the Milk from the Breast of a Woman may produce it, as may violent Exercise in hot weather, and errors in any of the non naturals; but if Evacuations are properly & early attended to, cold air freely admitted the Patient properly ~~attended to~~ treated, it is easily cured, & the reverse when hot & heating things are used, then the Brain suffers exceedingly &c —

Evacuations that are Spontaneous and afford relief, such as sweat, Hemorrhage from the nose &c. should be encouraged; but when Sweats are profuse & colliquative in the beginning of Fevers, they are of no service. — Again Nature frequently affords relief by Stool and Urine. — Every Fever I consider as an effort of Nature; but she is more successful sometimes than at others; if no

relief follows any discharge; it shews it is not the proper outlet for the Disease. — Eruptions in this Fever are oftener the effect of heating Regimen than a critical discharge, especially those which are Itchy &c. And appear as ment.d yesterday. — Petechial Eruptions and Vibices afford no relief but rather shew the malignity of the Fever. — When a simple pimple appears upon the tip of the tongue and then proceeds downwards through the throat &c, it is often serviceable by relieving the head-ach &c — A sense of general burning pain in the mouth commonly precedes the Apthae.

Apthous Encrustations which begin in the throat and spread downwards thro' the Intestinal Canal are bad and give no relief. — In these kind of Eruptions we should make the same Distinction as in the small-pox, into distinct & confluent: when these eruptions are to afford relief, it will be known upon their first appearance. —

Pain in the back part of the Head is worse than in the fore parts. — A moist Tongue is a good symptom especially if it changes from Dry to moist. Delirium is a common symptom in Fevers & therefore not to be considerd as a dangerous symptom in itself: there are differant of it

and each more dangerous than the other: the first or mildest Species of Delirium, is that in which the Patient talks in his sleep, or mutters when awake, but readily recollects himself when spoke to: the third or worst is that wherein there is a fierceness & unruliness, wherein the patient exerts his utmost strength & attempts to get out of bed, attended with Subsultus Tendinum, tremulous motion of the tongue, a particular wildness & inflamation in the Eyes; in these cases the Brain seems to be much inflamed: these are the worst & upon Dissection Abscesses are generally found in the Brain: but there is a particular circumstance respectg the Eye which merits attention, and that is when it appears so much inflamed upon first waking and in a short time this appearance abates; this does not denote the Brain to be already inflamed, but shows a disposition to inflamation; in this Case Cupping & Leeches should be immediately employed to prevent the worst.

If the Patient has an inflamed Eye with a Black tongue we have reason to think the Brain is affected.

Delirium in Children generally proceeds from their Primæ Viæ & is best

relieved by Emetics and Purgatives: in them the Head is seldom originally affected. — When the Tongue is dry & the patient does not complain of thirst it is a bad symptom. — The aqueous humour appear'g sunk & opake is also bad. — Those with Subsultus at the Wrists often recover, but when upon the Lips, Tongue, Face &c it is much more dangerous; for 'tis a general Maxim in Physic that the nearer the head the Convulsions the more dangerous. An Oppression at the Breast if not relieved by sweating is a bad sign.

A Delirium that comes on suddenly is worse than one whose appearance is more gradual. We are apt to fancy that cold extremities are bad; but they are only so in the decline of Fevers, for when they come on in the beginning, a Piece of Flannell applied to them will soon restore the warmth.

The worst symptom I know in the Delirium of Fevers is when the patient catches or plucks at the Bed-Cloaths, & imagines he perceives Objects as Flies &c. floating in the Air; here the Eyes are generally inflamed & the Patients Case is bad indeed,

There is a certain ghastly & squalid appearance in the Countenance, not easily described

but learnt from habit, which is bad. — In short the more a person differs from himself when well the worse is his disorder: for instance if a person used to talk low & deliberately, should ansr quick & confusedly &c &c of the other actions. — A bad symptom is the Patients suddenly drawing away his head when you are feeling his Pulse; this is worse than the other Species of Subsultus. — A noise & singing in the Ears generally preceeds Hemorrhages. — All involuntary discharges are bad especially of the Faeces. — Fœtid Diarrheas affording no relief are bad & show the general bad state of the Intestines; if they afford relief they should be promoted: in one of these the State of the Bowels, in the other their contents is shewn. — Lying upon the back with Eyes open and taking no notice of any thing is a very dangerous symptom as it shews extreme degree of debility, weakness & languor. — If when the fever remits there is a very florid countenance & a particular whiteness of the Eye they denote a Hectic, and I have of-ten pointed out these symptoms as attendants of a hectic to the Pupils of Guy's Hospital. — Profuse sweats in the inflammy Fever when

confined to the Breast alone, is a bad symptom & shews a disposition to a Hectic &c.

Deafness towards the end of a Fever is a good symptom, but when it attends at the beginning attended with an inflamed Eye tis bad & shews the Brain to be much affected.

Breathing that is *slow*, with a *hoarse* between the *in- & expiration* is bad: at these times the *Pulse* are *much slower* & unless we attend to the *breathing* at the same time, we may be apt to think the Patient is much better and the Fever gone, but those two symptoms should be attended to at the same time.

Fainting upon sitting up is very bad, as it shews extreme Prostration, and always attends in the most malignant Fevers: tis a bad sign for a patient to sink upon the loss of a small quantity of Blood: therefore we should Bleed in small quantities at a time and observe its effects; if proper, it will afford immediate relief, & Vice Versa. The Buff will not always point out the propriety of repeating V.S., as it sometimes attends in the most putrid fevers, then the Serum is generally

muddy, yellow or greenish. — Sediment in the Urine when it falls to the bottom of the Vessel and collects into a small space, it is a good sign; but when turbid or cloudy without a Sediment, not so good; but if it changes from thick to Pale, 'tis very bad.

The Hiccup is sometimes an unfavorable symptom, but often proceeds from a foul Stomach in which case a few grains of Ipecacuanha will remove it. — The appearance of the Tongue shews a great light upon the state of the patient, for it is the Index of the Stomach; and the Stomach's state depends on the nature & violence of the Fever; when it becomes moist it is a good symptom; but as there is no rule without exceptions, I have known it continue moist & hold its colour through the most dangerous Fevers.

The State of the Secretions in one part shews the state of the Secretions in the ~~an~~other part: thick Urine in a Fever shews that the free secretion of that fluid is perfectly restored, for the sediment is critical. — Urine is not the Materia Morbifica as is commonly supposed, but instead of being the cause is the effect of the Fever. But profuse sweating does not denote the secretions of the Skin

properly restored; but indicates Disease; while a gentle breathing moisture shews, the function is duly restored & restored.

One of the worst symptoms in the inflammatory fever, is *inflammation* or *Tension* of the *Abdomen* the Viscera appearing puffed up: when this attends with foetid Stools followed with no relief 'tis a bad symptom & only to be relieved by external & internal fomentations, as Glysters thrown up every four or six hours &c. and antiseptics; if that method of treatment does not relieve, we have reason to believe a mortification coming on.

The head and intestines seem in general to be most affected with this Fever.

Treatment of Inflam.y Fever

In the cure of this Fever we are first to consider whether any particular topical inflamation attends to require any particular treatment. —— V.S. is the first remedy, and to prevent fainting as the quant.y of Blood taken from the Patient should be considerable we should let the Patient lay in a Supine Position: the Pulse should be carefully examined at the same time, as it will shew the propriety or impropriety of this

Evacuation, or when Bleeding is proper the Pulse will rise upon the evacuation.

Sweating is often attempted without success before Bleeding but readily follows after.

The next step is to empty the Primæ Viæ. — The costiveness and the White tongue shew the necessity of Vomits & Purges, they are best when joind, & for this purpose I know nothing equal to the Tart: Emetic & Tartar Solubile mixt, or the Infusion Sena with Tart: Solubile & the addition of a small quantity of Emetic Tartar.

We should not be too early in the application of Blisters unless some topical complaint attends, as violent Head ache: or where the Vis Vitæ is generally affected &c so as to require a Stimulus; yet even in the first of these the use of Leeches, Cupping Glasses may be better.

We should be cautious of giving Opiates in the beginning of this Fever, (tho' they are proper toward the end) unless some violent symptom requires them: but we have the Authority of Sydenham to use them even then; he seldom or never gave a Vomit or Purge without an Opiate after them.

The Patient should be kept quiet,

from speaking as that derives humours from the Head, he should likewise be kept much out of Bed; it tends powerfully to lessen the Fever & Delirium; there is no danger of fainting; the Patient should be got out of his Bed, even if he is obliged to lye down again upon a Couch, for the very change of Atmosphere and situation will be of service: there is no danger of catching cold in the beginning of this Fever as is generally imagined, tho' there is towards the latter end or when the Fever is gone off the Fever itself preserves from this.

If the Patient flings his hands and feet out of the Bed or kicks off the Bed Cloaths from heat, and seems to be more uncomfortable when uncovered, indulge, let him follow his natural inclinations in it, as well as in the use of whatever he violently craves for.

The cure of this Fever principally depends upon the proper use of Bleeding, Evacuations from the Primae Viae plentiful Dilution proper acidulated: cold Water, which is often so much craved for, appears to me to be a safe and good Drink, the more thirsty the patient is in this Fever the better. Apple Water, Panada, Barley Water &c are good drinks. Roasted apples and such like antiseptic food

should be encouraged.

You may go on with the Saline Draughts and frequently use Glysters to keep the Bowels moist & empty, and we should never throw up less than a Pint.

Whenever any kind of Eruption is about to happen, never use many Bed Cloaths to "drive them out" as 'tis called, they are most commonly the effect of too much heat & do no good & may be suppressed with advantage.

The Drinks should be taken in small quantities & frequently; as overloading the Stomach with much, occasions anxiety &c.

If Efforts to Vomit come on they should be encouraged with a few grains of Ipecacuanha, by which means a Delirium is often cured.

If the head feels as though it was bound or tied round tight, Leeches may be used with advantage. The Head should always be shaved in these Fevers & fomented; & then it will be ready for a Blister if required. — Much Pain is troublesome & hurtful, but Blisters are very necessary & proper when the Patient is Comatose Lethargic

or insensible.

Inflamatory Fevers in the beginning are often Malignant in the end: & when inflamation precedes Putrescency 'tis worse than when the Putrid Fever is ushered in with its own symptoms, as it frequently injures some organ

The Bark is of little service till the Pulse are reduced to 100, the Urine deposits a Sediment, & every symptom is moderated: — if given before it aggravates every symptom.

In the hurry & Delirium toward the end of Fevers Pediluvium & Semicupium are very serviceable, by the quantity of Water absorbed into the Habit, by which means the secretions are restored: and the relaxing power of the tepid Bath produces an effect like Opium, it procures sleep & removes Head-ach. — After fatigueing Journey's the warm Bath is one of the greatest relaxers & affords the greatest refreshments.

In the Subsultus Tendinum & Hiccup that comes after the 14th Day Musk is used with more advantage when joined with an Opiate: — Frequently in these Cases an Opiate will succeed much better than either Musk or Camphor, but it requires to be exhibited in large doses; and may be often

repeated not only with safety, but great advantage. Opiates are bad in the beginning, but good in the end of Delirium in Fevers.

Wine is good when it lessens the Pulses frequency, but the propriety of continuing its use, must be determined by the effects of the first.

Lecture 13th

On the slow Nervous Fever.

This fever does not seem to have been known to the Antients; even Sydenham has but poorly described it: the best Treatise that has been wrote upon it is by Dr. Gilchrist in the Medical Essays of Edinburgh, & after him Dr. Huxham has well described it. It is the very opposite of ye inflam.y fever, & generally preceded by lowness of Spirits, interrupted Sleep, a sense of Anxiety & Oppression; and always upon the first attack there is a remarkable deep respiration with a kind of sighing & sobbing, which, should be carefully attended to as it has been often taken for a Peripneumony, & Bleeding has been incautiously used, to the great detriment of ye Patient.

This Fever has always remissions

from the first and is always worst at night.

The Pulse are not much quicker than natural but more so at night than in the morning. The Patients are better in the bed than out of it, shun *Company* and are constantly afraid of dying. There is a great prostration of appetite as well as strength; and for the most part a considerable degree of giddiness or swimming of the head; alternate Heat & Chills, but the heat is transient and not permanent; there is frequent flushing in the Cheeks, while the tip of the nose, fore-head & Ears are Pale & Cold; and I have seen the extremities cold, when the face has been flushed. — The Patient has a constant Drowsiness & appears as if asleep, tho' really awake; — has a troublesome nausea & frequent efforts to vomit but bringing up nothing but a little tough Phlegm, complains of no great thirst. — The Countenance is pale & sunk. The *Breathing* which is frequently *laborious*, *is* from *early Spasms*; & is best relieved by Wines and other Cordials. — The Extremities are *Cold* even in the beginning of the Disorder. — The Urine is pale & deposits no Sediment, tho' sometimes a furfuraceous Mass is seen floating in it. — The tongue in the beginning frequently resembles a healthy Person; but afterwards it is covered with a yellowish mucus, & dry in the middle. — In the beginning the Eyes & Ears are

very susceptable of light & sound; but the too irritable state of the Ear frequently ends in deafness, which towards the end of the Disorder is favorable.

In the advanced stage of ye Disorder the Pulse is extremely quick & may be said to flutter rather than beat. This Disorder generally lasts fourteen Days without any sensible Crisis; upon the seventh Day there is generally an exacerbation of all the symptoms; greater anxiety, frequenter sighing &c the Patient is subject to frequent faintings & especially upon sitting up; partial sweats are common particularly upon the Fore-head & Breast, in form of Drops; but they, with or without Eruptions seldom afford any relief. — When the Urine changes and becomes more pale, tis common for a Delirium, Subsultus &c to come on. — The Delirium is of a particular kind in this Fever; it seldom arises to an unruly Phrensy, but generally consists in a low muttering incoherent conversation with himself, tho he is generally rational in his answers to any particular Questions.

Another symptom worth attending to is the tremulous motion of the Patients tongue when he attempts to put it out; this shews extreme Debility, and generally the use of Cordials are required.

In the latter stages of this Fever the Patient is sensible of extreme cold, the Pulse is low and intermitting, he is insensible to both light & noise; the Eyes appear opake, a Lethargy comes on with Subsultus & finally he dies, generally about the seventeenth Day, or from the 14th to the 18th; but if we can by Wine and other Cordials protract his life to the 20th or 21st Day he will generally recover.

The Patients are generally better to appearance a few hours before Death. — Through the whole course of the Disorder they labour under extreme Debility & prostration of Spts.; are afraid of going to sleep for fear they should not wake but die.

There are no Critical Days or evacuations to this Disorder; but we commonly find that the symptoms are relieved by a gentle moisture equally diffused throughout the body, but partial sweats are bad or at least always doubtful and shew the part underneath where the sweat arises, to be locally affected.

Spitting & even a Salivation is often critical in this Disorder, or rather affords great relief. Sleep is the best Crisis: I have known Patients in this Fever fall asleep, be extremely difficult to wake & continue sleeping three or four Days when they awake much relieved.

This fever sometimes runs

out to 40 Days & frequently ends in Idiotism, but as this symptom is owing to great weakness, it generally abates as the strength returns, and when the Patient has recovered his strength he generally recovers his Reason. The Circulation is often so slow as even to endanger a Gangrene where Blisters are applied.

It is always better when Blisters excite an inflammation on the Skin, than when the subjacent parts are dark coloured, and discharge a thin dark coloured Matter.

The Urine is not to be depended upon in this Fever. — The Remissions are very irregular, tho' the patient is generally better in the morning than towards night.

Towards the end of the Fever the alarming Symptoms of Malignity are apt to appear; as black tongue, Vibices, and a vitiated state of all the secretions; but for the most part the Secretions do not appear in the least affected, as the Disorder is chiefly confined to the Nerves.

The Jail Fever appears more like this in the beginning, than like a contagious Fever, but the Vibices &c, comeing on afterwards shew its malignity.

In the Nervous Fever the fuller and quicker the Pulse, the less the Delirium; but the reverse obtains in the inflam.y Fever.

When the tongue becomes moist & discharges a quant.y of Saliva it is a good symptom;

as when the Deafness terminates in abscess in the Ear or Parotids &c: angry Eruptions about the mouth afford relief.

A Diarrhea if it happens about the ninth Day, does not prove too violent, and is easily restrained, is a good symptom.

Aphthæ appearing distinctly and not too early in the disorder afford relief; but if they are confined chiefly to the throat, and which is loaded with a curd-like Mass, attended with heat & difficulty of swallowing, then they are bad and Nature is seldom able to procure a seperation of them before death.

Miliary Eruptions afford but little relief, and when attended with sweating tend to reduce the patient & do mischief; the more inflamed the Eruptions appear, the better.

Subsultus, Coma, involuntary Discharges of the Fæces, Hiccup, gulping with a difficulty of swallowing, are bad symptoms.

Profuse & clammy sweats in the beginning with cold extremities are bad.

Petechial Spots & all Spots re-sembling Flea bites are bad. — A violent pain in the lower part of the Back is a very bad symptom & always attends in the confluent small Pox & shews great Malignity.

(Cause) Those with weak irritable Nerves

and relaxed Habits are predisposed to this Fever; while those of Robust Habits are liable to inflamm^y Disorders.

The Strength being ~~evacua~~exhausted by by evacuations of any kind, whether natural or artificial; long continued Watchfulness, Anxiety of Mind, Disappointments &c, tend to produce this Disease; as does dwelling in low damp situations, where the Air wants that Spring and Elasticity it otherwise possesses, particularly among the lower kind of people who cannot afford to live generously, and are generally dirty & foul: Wine & cleanliness are good preservations from this Disorder.

In this Disease the moving powers seem to be particularly affected, as appears by the great prostration; — the secretions don't seem to be much affected: the eyes are not inflamed, nor the countenance flushed, therefore the Brain does not seem to be much affected, but the Cerebellum mostly.

The Spasms in this Fever seem to be so universal that nature can't effect remission.

This fever is not contagious like the inflamm^y; neither the Urine nor sweat is offensive & the tongue does not become black but appears of its natural colour: this Disease is

very distinctly marked by its symptoms.

(Cure)

The first Indication in the cure of this Disease, is to assist the Vis. Vitæ, & support the Patient by a proper Regimen: & this is best effected by the free use of Wine, Bark & Blisters.

The second indication is to remove the Spasms upon the surface of the Body, which resist the circulation; and this is done by Opiates, Fomentations and Antispasmodics.

And whenever Nature points out by any critical evacuation as a Diarrhea &c we should endeavour by proper means to promote it.

And we are to attend to and Palliate the most urgent symptoms.

In the first place all great Evacuations are to be carefully avoided: we should be particularly careful in the beginning not to be deceived by the Deep & difficult Respiration; for many taking this for a symptom of Peripneumony, have bled their patients for it to their great disadvantage; this distinguished easily; the cough of a Peripneumony is absent; the Weakness of the Patient & his Pulse, Deficiency of Animal heat, Paleness of the Urine &c, these all distinguish this from a Peripneumony: — If but little Blood is taken from a Patient with this Fever, it sinks him greatly. —

The use of a Vomit is easily pointed out by the Nausea &c: this is often a Nervous symptom, but wherever it is present it shews the propriety of a Vomit; which, does not in this case relieve from emptying the Stomach, but from the Shock & Stimulus; but there is often a quantity of tenacious Mucus discharged by this means. — We may use Ipecacuanha or Tartar Emetic; perhaps the Ipecac: is best as being more gentle, & ruffling the constitution less than Antimony: — or it may be mix'd together, which will prevent the Tartar Emetic from Purging the Patient. — Vomiting is much more wanted & more proper than Purging, and an Emetic given in the beginning frequently checks the progress of the Disorder, by rousing, without sinking from too great Evacuations.

The Saline Purges are the least proper in this Disorder, as being too cold: — Rhubarb with Magnesia Alba, or Tinct: Rhei & the warm Aromatic Purges ans:r best: — The Bowels should be kept Soluble by Glysters, with the assistance of a little Rhubarb, which answers best for this purpose.

In the advanced stage a Vomit is frequently proper for the Difficulty of breathing

& swallowing from the Phlegm &c. — it is always safe, and at this time Salutary; — we want Stimulus to move the irritatory powers & Vomits ansr. this purpose very well. —

We are then to go upon the strength-ening & Diaphoretic Plan: — The Infus: Contrayerv: & Tinct. Serpent: ansr. the purpose best; sometimes we may join a little Spt. Mind: with advantage: — there is no indication for the Bark at this time: — When there is a great heat, and dryness upon the Skin I use the Julep e Camph: & Spt. Vitriol: — and the Antimonial Wine for the same purpose, but cautiously avoid profuse evacuations.

The Tart: Emetic in small doses well diluted and given at proper intervals is the best & safest Medicine in the Materia Medica; by this a Diaphoresis is often affected, & it is best used in the beginning. — a few Stools in this Fever will often weaken the patient very much.

We should attend to an early & Spirited use of Opium: ten or 15 Drops of the Tinct: Thebaica should be given every night, it always answers & I really believe has saved the lives of very many: — in the Subsultus in the lowest stage of the Disorder I have given the above doze every four hours till the Subsultus has abated, with the

greatest advantage. — The Elix: Peruv: has been recommended by Dr. Huxham, but the Tinct: the bark: ought to ~~have~~ the preference; — tis surprising how much of this Medicine the Patient will bear in these Cases. — I would always chuse to give both Camphor & Opium by themselves; the first I would give in the Day, and the last at night.

In the Aphthous and Sore throat of this Fever, Astringents should be avoided, & emollient softening Medicines used: the Mel: Rosar: diluted with Aq: Hordeat: — Decoct: Sem: Lini are the best.

In a Diarrhea, in which we fear the patients sinking, the Rhubarb, with Elect: e Scord: is the best Medicine, it moderates without checkg the discharge: — in the mean the Patient should be supported with Animal broths, as Chicken Broth, Beef Tea &c. — here is no tendency to Putrefaction, nor does the patient nauseate these things. — The best drink is Rhenish Wine or Old Hock & Water; for these allay thirst, Dilute, and are gently Cordial and antiseptic.

The Haust: Salin: Nitre do not answer in this Disorder: the Sp. Mindereri mixed with the Saline Draughts, or Julep e Camphora may be taken in the hurry of the Fever when there is a considerable dryness upon the Skin; it dilutes & promotes

Perspiration when other means have failed.

Wine abates the profuse sweats; Gilchrist, the best writer upon this Disease, says he has recommended Wines as the best Opiate & supporter of Nature. — When the Patient is reduced, very great quantities of Wine may be allowed with the greatest advantage; I have known 2 Bottles of Madeira drunk in 24 hours, & that it has snatched the Patient from the Jaws of Death: we should however begin with it cautiously, watching its effects; first diluting it with Water, then giving it by itself, and at length, as much of it as the Patient will take, especially if he craves for it: The Pulse becomes slower upon its use, the Patient falls asleep and then awakes much better. — You should always be careful in telling the Nurse the proper quant.y & never trust to her discretion, for if you order little she will give more, and if you order much, she will fall short of the quantity; therefore the best way is to desire that a certain quantity may be given before you see the Patient again, mentioning the time of yr. visit, and she will always give it at the most proper times. — I do not see why it may not be given in the form of a Draught, adding a little Spirit: Cort:; for in the low stages of this Fever there is not a better remedy. —

Wine & Opium ought to be Hand in Hand in Fevers except those of the Inflammatory, where they are both improper.

A fomentation may be used to the extremities with the greatest advantage; it takes off the Anxiety, Heat & restlessness; & may be made with Vinegar & Water, one third of Vinegar.

Blisters are of the greatest use; for Stimulants are much wanted; they should be early applied to the back of the head, when it is much affected. When the anxiety & oppression of the Precordia are great, Blisters to the Arms are very serviceable, as 'tis the Stimulus and not the evacuation we want from Blisters; they should not be allowed to lie above 24 hours.

For Stimulating, Sinapisms are quicker & better for Blisters, they should not lay on above 12 hours: they will occasion discharges.

These Stimulus's relieve Coma, Delirium & Subsultus Tendinum.

When a distinct remission is procured, use the Bark: — it is wrong to think the Bark a Sovereign remedy or Specific for all Fevers; it always answers best when the Crisis is most regular; in profuse and colliquative Evacuations the Bark is then useful &

especially when the Fever returns with Rigor, resembling an Intermittent; and if early & colliquative sweats come on, it becomes highly necessary. — When the Bark purges it should be checked with a little Tra. Thebaica; but the Confect: Damocratis with a few Drops of Tinct: Theb: is the best Opiate in this Fever.

In Malignant Fevers Vegetable Acids should be joined with Bark, they are highly proper both to prevent its heating & promote its antiseptic powers which last it does to a great degree.

Lecture 14th

On the Putrid Malignant or Jail Fever.

This Fever is by some improperly called the Petechial, & by others the ardent Fever.

The Bilious and yellow fever are properly of the Malignant Kind.

They attack with much greater violence, than the Nervous Fever, the Cold Fit is more severe and lasting and the heat more permanent: there is a fulness, quickness and some degree of tension in the Pulse; the head is giddy and

violent painful there is a Nausea & disposition to Vomit, & a great pain in the Fore-head, Eyebrows, or in the bottom of the orbits of the Eyes attends: the Patient is restless and complains of a violent pain in the Region of the Kidneys; — this we before pointed out as the attendant on Malignant fevers; — the eyes appear heavy & dull, countenance sallow and bloated, the Tunica Conjunctiva of the Eye becomes ~~Heated~~ yellow, there is a great Pulsation of the temporal & Carotid Arteries, while the Pulse at the wrist are small; this symptom often precedes a delirium. — Bilious Vomiting and early Singultus are bad symptoms. — In these the subsultus and trembling of the hands happen early, with numbness of the arms and lower extremities: there is a great Prostration, & increase of the Disease towards night. — the tongue is dark, even black & dry; Speech indistinct, Patient cannot easily articulate his words; thirst in the beginning is considerable, but abates in the advanced stages; Lips and Teeth are furred with a black and putrid sordes, which if not attended with thirst is a bad symptom; urine is of a dark colour like strong Lixivium & blood is sometimes mixt with it; stools are very fetid; abdomen is often tense; stools are frequent, sometimes livid and bloody & are voided with Pain & griping. — When the stools do not

relieve, and the Abdomen continues tense, we have reason to fear a Mortification. — Eruptions black and livid, not elevated above the Skin, that don't disappear with pressure, that do neither Itch, nor afford relief upon their appearance are bad symptoms, and shew the greatness of the Disease. — When Hemorrhages proceed from livid Spots, tis a fatal symptom; it is merely the effusion of dissolved Blood. — Dark brown spots like freckles in which the skin is said to be marked, are bad. Ecchymosis shew great malignity, they generally begin about the fourth or fifth day & continue sometimes like Measles not elevated; — about the 11th or fourteenth they are followed by Miliary Eruptions, which generally proceed from profuse sweating & afford no relief: — looking into the mouth we see the fauces red & Glassy, which - - -

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Aphthae with dry skin & heat, difficulty of swallowing affording no relief, becoming dark, & spreading thro' the Intestinal Canal are bad symptoms. The Duration of this Fever is uncertain; sometimes it runs out 40 Days & yet the Patient recovers; but they more commonly die before the 9th Day; some die within the 48 hours, with both Petechiae & Hemorrhages. — In warm Climates it often carries off the Patient in 12 hours. — When

the Patient is early carried off, the head is mostly affected &c.

Fevers of this kind appear to me to be all of the same nature and their differance seems to proceed wholly from differan Climates.

They are distinguished from the Inflamat.y by being the Disorder of the Season; for inflam.y complaints are generally accidental, not general: There is a peculiar sunk countenance, with a certain appearance of the Eye which are distinguishing symptoms; low quick Pulse, early prostration, a fœtor in the Secretions.

In this disorder the lower the Pulse, the higher the Delirium, but the reverse obtains in the inflamm.y Fever.

The Blood tho' covered with a buffy coat, yet the Serum is very yellow and tinged with Blood. In the beginning of this Disorder there is frequently a tendency to Vomitt & Diarrhea; — but in inflamm.y disorder the Patient is generally costive, and there is not so much Vomiting in the beginning; — there is a peculiar heat impar=ted to the finger of the Physician, a smarting sens=ation that often lasts sometime after he rem=oves it from the Patients Wrist.

Worms are frequently discharged in this Fever, from their situation being no longer

tolerable; from the bad state of the humours in the Primæ Viæ.

Patients with this Disorder are very liable to relapses; — Giddiness, Pain in the back, Watchings &c, generally precede a relapse & it frequently leaves behind it Oedematous swellings of the Extremities, & sometimes Paralytic, which abate as the Patients strength returns.

If the Urine deposits a Sediment, and Deafness attends without stupor or Coma, they are very unfavorable symptoms: — but a wild staring countenance, change of Voice from the natural, frequent sighing, inability to put out the tongue, plucking the Bed Cloaths, Haemorrhage by stool or Urine, Difficulty of swallowing &c, are bad and dangerous symptoms: but sometimes this Disorder attends without all these symptoms.

These Fevers are most frequent where the Air is most replete with Animal Steams, as in Ships-holds, Camps, Jails &c.

The Jail Fever is compounded of the Nervous and Putrid: — Strangers are more liable to catch this Fever than those who are frequently in the infected Air: — hence a person will sometimes contract a Putrid Fever on visiting Newgate, when there is no such disorder prevailing in the Place.

The Jail Fever is different from the

Putrid, has more nervous symptoms; & bad air is frequently the cause of it, as in the Dysentery &c.— Its progress is very rapid, sometimes it kills in two days:— it attacks those chiefly who are weakened by previous Evacuations, as Salivation &c; and is often met with near Marshes, Lakes &c, & especially where much animal & little Vegetable food Food is used: hence in Turkey where the Inhabitants live mostly on Animal food, Drink no Wine, and where the habit is generally weakened by the constant use of Opium & the warm Bath, the Plague is very common:— but 'tis less common in England, because we are more cleanly, our Streets are Wider and Cleaner, our Clothing is better fitted for the Climate, and we use a greater quantity of Vegetable with our Animal Diet. The proximate cause may be reduced to two heads:— 1st. that of all putrid Vapours which are Sedative upon the Nerves, and diminish their Vital powers:— and 2ndly by mixing with the Animal Fluids, they are broken down, dissolved, & pass off by the Secretions; being unfit for the purpose of Life.— In hot Countries the Bile from its tendency to Putrefaction produces frequent Diarrheas Vomitings &c.— The difference between this Disease here and in Warm Climates, is an early yellowness,

from an Absorption of the Bile; or perhaps from a deficiency of Red Blood & the Serum entering the small Vessels; both of these in my Opinion concur. — When these Patients die there is often found a Gangrene upon the Intestines and Brain. All Fevers with a great Secretion of Bile have a tendency to remit.

It is constitution & Climate alone that constitute the difference of the Putrid Fever: but as some of you Gentlemen may have occasion to attend that Species of it peculiar to hot Climates — or the Yellow Fever as tis called I shall now describe it.

(Yellow Fever)

It suddenly seizes with great Debility, Giddiness, Nausea, pain in the Loins, pale Countenance, Dry Skin, trembling of the Extremities, heavy dull Eye, small weak pulse, frequent Hiccup, Chills, followed with heat, which becomes more permanent in the advanced Stages; frequent Vomiting & Purgings, Restlessness, great thirst, foul tongue, Delirium &c. — Every moisture upon the Skin promotes a remission, which is known by the Pulse becoming less frequent, & with less heat &c. — and its coming on towards morn.

As there is seldom more than one remission in these Fevers in hot Climates, this is the reason why we should watch for it with the greatest attention, that you may throw in the Bark immediately — if

this Remission is not discovered and the Bark not actively employed, you lose your only time, and your Patient fall a Victim to the Disease.

All the Secretions are Yellow, the Blood & Eye have a Yellow hue:— there is a tensive Pain about the Region of the Liver &c:— these symptoms proceed in this Disorder, and Death frequently brings up the Rear.

The principal difference between this Fever here and in Warm Climates, seems to be that in the latter there is a much greater quantity of Bile secreted.

(Cure)

In the cure there are four indications,— first to relieve the violent symptoms of the first stage:— 2ndly, to promote the secretions:— thirdly, to support the Vis Vitæ; and 4thly to resist the tendency to Putrefaction.

First, the symptoms are to be relieved by proper evacuations:— in full habits with full quick Pulse, difficult breathing, great & violent throbbing pains in the head, especially in the back part, with an inflamed Eye; under these particular circumstances V.S. may be used to a few ounces.

As inflammations suppurate much sooner in hot than cold Climates, you

should carefully watch the Pulse during the evacuation, or otherwise you will easily do wrong as ℥ſs ad ℥IV vel ℥VI is sufficient: — nothing will relieve a hot dry parched ~~tongue~~ skin sooner than taking away a few ounces of Blood, and bring on a regular Perspiration. — Dr. Lind, thinks a few ounces of Blood may be taken away under the above circumstances with the above precautions.

In violent head-achs we may use Cupping Glasses and Leeches applied to the Temples, when the Lancet would not be safe, & we may take double the quantity by Cupping, that we can with the Lancet without weakening the Patient.

Then we are to proceed to the early and judicious use of Evacuations by Vomiting and Purging; for the Disorder seems at first to be principally seated in the Primæ Viæ, where evacuations are highly proper; but in the Nervous Fever the reverse. The Tart: Emetic with Tartar Solubile should be used and the Primæ Viæ washed thoroughly clean, but we should carefully attend to the Evacuation by stool; that being the most natural way to discharge the Bile.

These Evacuations help the remiss-

=cions and prepare the way for the Bark: — but if after the Stomach is cleansed, the Vomit^g continues from an affection of the Nerves; then we may endeavour to check it by the Tinct: Thebaic in Aq: Menth: Vulg: — or the Saline Draughts in a state of effervescence; with a grain of the Extract: Theb:, as it answers better than the Tinct: Theb:, Infus: Menth: or Boyl'd Water. The Tension of the Abdomen is best reliev'd by Glysters of the Chamomile Decoct: pro Clystere to be thrown up from time to times to act as a fotus to the Intestines. — During the inflammatory stage of this Fever the Patient ought to have a Glyster every 24 hours at least, if the body be open, to act as a Fotus; for if a Tension comes on the Abdomen with a soreness on the Touch, it indicates a great degree of inflammation, and we have reason to fear a mortification.

The Cream of Tartar in Water affords a good Drink; especially at Sea, where there are no Lemons to be had. — All Physicians agree to the Evacuating Plan in the beginning.

The Delirium to be quieted by the use of Opiates: — but Blisters are not so useful in this as in the other Fever.

As soon as a remission is

brought on, then have recourse to the Bark directly: but attend to the inflam.^y symptoms and the use of Evacuations before you venture upon it. — If the inflammation does not end before the third Day, it generally terminates in a Gangrene.

The Bark should be used with Acids in the remission, or with the Sp.^t Minder: to keep up a Diaphoresis: — The Decoction answers better than the substance; tis better for weak Stomachs, more soluble, and more readily diffused thro' the habit. — You should be careful to pour off the Decoction, before it becomes cool, otherwise it becomes clear and the most valuable resinous parts are precipitated to the bottom and lost.

The Serpentaria with the Cortex don't heat so much as when used alone, and should always be used when we would support the Vis Vitæ. — Huxham's Tincture of Bark is good with the Decoction, but not alone as we can never throw sufficiant quantity of Bark into the Body in a short time when the Tincture is used alone.

We should never use the Bark till the Pulse becomes slower, the skin moist and temperate: but if you have a soft skin, with a freedom of Urine and a Diminution of

Pulse, you may consider it as a remission, & give the Bark with freedom; if we lose this opportunity in warm Climates, we may have our Patient carried off before another Remission &c.—

Free Air, a Vegetable acescent Regimen, and acidulated Diluting Drinks, should always be used in this Disorder, the Vegetable acids in preference to the Mineral, with the other means of relief; as Wine has a property to heat, (which heating and febrile property may in a great measure be taken off by joining it with acids) it is not so proper in this as in the low nervous Fever, where it is a powerful Remedy: and Wine is not so proper in the Diseases of warm, as in those of cold Climates.

Diarrhea is to be treated by the Rules laid down in the Discourse of Fevers in General.

Suppurations in different parts of the Body, as of the Parotids and other Glands should be treated by Emollients &c. & when the matter is formed should be early opened: — in this Disease every tendency to suppuration ought to be encouraged & to be early opened.

Hemorrhages should be treated by the use of Bark and Acids &c.
When Wine is indicated in this

Fever, Rhenish, or old Hock should be preferred.

Fixed Air injected into the Intestines is proper in this Fever.

In all Fevers where the sweating is great, the Patients Linen & Bed Cloaths should be often changed.

In Putrid Fevers small doses of Opium procures Rest.

In Oedematous swellings in this Fever Decoctions of Horse Raddish, Wormwood &c, as a fotus, with Bark have been of much service.

In this Fever if you would wish to bring on a Diaphoresis, the Julep e Camph: with the Sp. Mind: are best; — if the Julep e Camph: should bring on a sickness, then we should join it with acids, which will take off the sickness, & render the patient to take the Julep e Camph: in almost any quantity.—

On the Malignant Fever of Warm Climates.

Fevers differ less in their essential nature than in their appearances.

Dr. Lind thinks the Fevers of warm Climates differ from those of other Climates, only in their degree of violence & that the method of treat=ment should be much the same only with a

small degree of diversity, as Fevers of warm Climates have an early tendency to become Putrid.

They attack with symptoms of early prostration; — are more disposed to remit than those of warm ~~Climates~~ Countries; large quantities of Bile are commonly discharged from the Primæ Viæ in this Fever; a yellowness of the Skin commonly happens; and a deeper degree of this Colour constitutes what is commonly called the Yellow or Bilious Fever: — the Skin often becomes inflamd, and as the Fever advances the thirst &c increases; Vibices, Petechiæ &c. appear, Delirium & colliquative discharges come on and Death closes the scene.

In these Climates, Putrefaction advances faster than in Colder; joined to which, the debilitated habit is less able to cope with its violence.

In this Fever Bleeding will under some particular circumstances in small quantities procure a more perfect remission & fit the Body for the Bark. — Purging in this Fever is better than Vomiting, to discharge the Bile from the Intestines: — The neutral Salts, Cream of Tartar, Tamarinds &c. are the best Purgatives: then have recourse to the Bark, keep the patient cool &c, and you will give all the relief in yr.

Power.

In topical pains as in the Liver & to support the Vis Vitae in the last stage, Blisters may be proper, but they should be used with caution.

c.1750

c.1759. See Cleghorn on Minorca, and Lind — Hillary on Barbadoes; the Disorders of Carolina &c

On the Plague

This complaint is always moderate in cold Weather, but the extremes of heat are equally potent in checking it: — its symptoms differ much in different people, and in a very short time the event does not correspond with the attack; the symptoms are alternate heat & Chills, great pain in the head back and loins, intense head-ach, great reachings of porraceous Bileous matter of an offensive smell; great giddiness, great and sudden loss of Strength, great anxiety, great pain in the glands particularly the Paratids.

Symptoms of violent Fever, are the Face appearing livid &c, with a Cadaverous hue, the Eyes appearing muddy &c, with a confused countenance.

The pains terminate in suppuration of Glands called Buboes, which are often critical: — When the Buboe is opened it

often suppurates kindly & heals soon.

Petechiæ and Carbuncles often appear: — sometimes there is an eruption resembling the small-Pox, which gangrenes: — they are delirious &c: — it generally destroys before the third day; but some have struggled to the eleventh.

The Urine is generally high coloured but without a Sediment: — neither Vomiting or Diarrhea afford much relief.

(Cure) It is found that a few ounces of Blood taken away, in full strong habits, at the first accession is serviceable: — then cleanse the Primæ Viæ by neutral Salts and Tartar Emetic: — then give the Bark freely in Wine; it promotes suppuration of the Bubo.

Blisters in the advanced stage are serviceable: — sweating in the beginning has been found to do good: — Fotuses and Semicupium, better than the heating applications.

To check the progress of this Disease, 1st avoid an infected person; 'tis convey'd by Cotton &c, and is communicable only by contact; it cannot abide itself in the air or diffuse itself; 'tis found that you may be safe on the Top of a house, when the Disorder is in ye Street

Gun-Powder, Acids, Sulphur, and intense heat, prevent its being propogated: — Cleanliness, Generous living, Chearful Mind &c, all prevent its progress, and protect the healthy Person from its attack

I think the Air of Jails might be rendered wholesome by Air &c. — I myself once put a stop to the progress of Jail Fever, by ordering the Rooms to be ventilated by the Evolution of fixed Air from Vitriolic Acid & Chalk.—

Lecture 15th

On the Intermittent Fever.

The Intermittent Fever is a disorder wherein there are distinct intermissions between the Paroxysms returning at stated Periods; and is differently denominated according to the length of time between the Fits, as a Quotidian if every day, or twenty four hours; Tertian if every other Day or thirty six hours; and Quartan when there is an absence of the Fit for two Days.

When the disorder is present every Day, but the hour of invasion is the same every

other Day, then 'tis called a double tertian: — for example, if to Day it comes on in the morning as before, tomorrow in the afternoon, tomorrow in the afternoon, and the Day following in the morning as before &c: — and thus the double quartan &c: but I dont approve of this distinction, and think they should be named from their appearances, as these double tertians &c are more difficult of cure and require a different & particular treatment.

The periods are much longer, being sometimes a month, a year &c.

By improper treatment, as a heating Regimen &c neglect of evacuations &c, they may be changed into continual, or even inflammatory Fevers.

When an inflamy Fever becomes a continual it is very unfavorable; & when a continual remits, 'tis a favorable symptom. There is another distinction which is very proper and which Dr. Huxham mentions, viz: into Vernal and Autumnal: — the Vernal are from Feby to July; and the Autumnal from thence to Feby: — the distinction is very accy (and as mentioned in my former Lectures) as the Vernal partake much more of the Infl-

amatory; while the Autumnal are much more of the Bilious and Putrid kind.

The fit or Paroxysm of an Intermitt. Fever is justly divided into three stages, viz: the Cold, hot & sweating. Symptoms in the first stage are Yawning and Gaping, a disagreeable sensation of cold down the Spine; paleness of the Extremities, the nails sometimes appear ~~as~~ perfectly dead, Lassitude, Weariness, a quick and small Pulse Cold People, whose circulation is languid, are frequently carried off in the Cold fits, Pain in the Joints, back and head, a Sensation of Cold with Horror, Rigor and insensibility, difficult breathing &c, Anxiety, Nausea, Vomiting, great thirst, Urine thin, Pale, and Watery, and secreted in small quantity. These symptoms prove a defect in the moving powers, with a Spasm on the surface of the Body; which, is really the proximate Cause of this, and all other Fevers.

During the Cold Fit of a Quartan the body suffers such a change, that the Patient may be burned to the Bone, without complaing.

of much pain: — also in the Cold Fit ulcers may dry up, and all the secretions are changed; hence a Ring which fits a finger shall fall off, as the system in general becomes so much contracted. — — The continuation of this Stage is uncertain, but is generally longest in old people and those with Quartans. — When the Cold Fit is in some measure perceived in the hot fit 'tis a bad symptom. — Quotidians generally come on in the morng, Tertians at Noon, and Quartans toward night; but this is not invariably the case.

Sometimes instead of the Cold, the hot fit is preceded with insensibility in a particular part; but a Physician should be able to detect an Intermittent Fever thro' all these disguises

Second or hot Stage. — When the above symptoms have contd. for sometime, they become milder, & heat succeeds; a violent pain in the head and even some degree of Delirium comes on; the Ulcers become red; Hemorrhages before stopt now return; Pain and restlessness come on, with a dry Skin great thirst &c: — in general the

more severe the Cold Fit, the more violent the succeeding Heat; — in the Young and vigorous, the hot Fit is the most violent; and in the Old and infirm, the Cold. People who are much reduced & weakened by a long continuance are more apt to die in the Cold Fit, while those who are of a Plethoric habit often die apoplectic in the hot Fit: — in those particular Cases, where the symptoms are of this kind, the Lancett may be used with advantage. If we would judge of this disorder by the Urine, we should always examine that which was voided during the sweating stage. — The Autumnal Agues dont so frequently deposit a Sediment, or go off in a regular sweating so frequently as the Vernal; even in the intervals of these Fevers the Patients are not perfectly well. — Vernal are by much the most easily Cured; and tis a custom with many Practitioners to allow the Patient to have several Fits without any assistance, thinking the Action and Reaction of the Fever, serviceable to the Constitution (and often they cure chronic complaints); — this Vernal Ague is generally cured from the fifth to the ninth Paroxysm: Quartans, & those of the autumnal kind remain for

months together; — they are mostly confined to Old People & low swampy situations, and are the most difficult of Cure; Tertians are the easiest. The Intermittent of Children are much better Cured by small doses of Calomel & other Purges which cleanse the Primæ Viæ of vitiated Juices, than by the most plentiful use of Bark, which in these cases often answers as good purpose, tho' used for a long time. A Quotidian is of longer duration than a tertian; and a Quotidian is almost constantly varying its Types.

In England, Agues in general are not dangerous; but in hot Climates where the Patient is much exhausted, they are. — In Weak Habits vernal Agues are apt to produce Viceral Obstructions; — in these Cases the Bark is generally blamed but in my Opinion, unjustly, for I think the Weaker the Patient the sooner should the Bark be given to restore the Strength and thereby prevent the Viceral Obstructions. Van Swieten mentions a Patient that had an intermittent for 22 Years.

Intermittents with Hemorrhages in the Intervals of ye Fits, Hectic Heats, Partial & colliquative sweats &c, are difficult of Cure:— profuse sweats weaken the Patient and protract the Cure; — the soft and gently moist Skin is much more favorable than when covered with a profuse sweat. Ichorous discharges, Jaundice, Dropsy, high Coloured Urines, and that which is with difficulty discharged, shew obstinate Obstructions of the Viscera. In the Vernal Intermittent the 3d Paroxysm is the most severe; the Seventh the mildest &c. Vernal Agues have been found to relieve the Rheumatism, Gout, Disorders from bad Digestion, Convulsions, Paralytic complaints &c. There is another symptom of importance, and which does not seem to be sufficiently attended to, and that is, a voracious Appetite preceding the Fever denotes a long continuance of this Disease.

Smarting Red and Itchy Eruptions about the Lips &c are serviceable: but Petechial Spots and Hemorrhages from the Nose

from dissolved Blood, and violent pains in the head in the Intermissions are bad - Symptoms

Intermittent Fevers are apt to relapse after they appear to be cured; therefore to prevent a return, we should continue our Medicine & attention for a fortnight after the symptoms disappear. Anasarcous swellings sometimes come on after a Vernal ague, but they depend upon relaxation, and are to be cured with the Bark: — But Autumnal Agues often precede Dropsies, and as they frequently return after having disappeared for sometimes, we should continue the Bark for at least 20 days after the Cure. Active Purges are bad, and should cautiously be avoided as they have frequently brought on a return of the Ague. — The Vulgar Error that Bark must be purged off should not be attended to; one very gentle dose is fully sufficient.

The Occasional Causes

Particular situations & Mountains are most productive of this disorder, as the

Fens of Essex, and the Hundreds of Kent; Chatham, Deptford, Gravesend & other Places bordering upon damp Exhalations from Stagnant Water & Mud not sufficiently covered. — In warm Climates Intermittent Fevers are really contagious, in a word as the Small Pox.

Effluvia, Contagion and Moisture produce this Disease, and particular Winds, as the East, are productive of this & most other disorders. — It frequently is in one Place while another very near, escapes; for Dr. Lind has told us that 'tis frequently in Portsmouth and not in Gosport; therefore let it be carefully remembered that every Person move from ye Place where he was seized; this indeed should be attended to in all Disorders before a cure is attempted.

Strangers are the most liable to this Disorder upon going into a place where it prevails, and the Ague is much the season'd Disease in Essex, as bilious Disorders are of Warm Climates.

People who live generously and take their Glass of Wine are not nearly so subject to this Disorder as the Poor & low livers.

Anxiety and such Sedative Passions as Grief & Fear; and profuse Evacuations tend to bring on this Disease, inasmuch as they tend principally to affect the Nerves; and 'tis here this Disorder is chiefly seated, as is Evident from the Cause being affected by Charms, old Women's Amulets &c, from their Effect upon the Mind; when the Confidance of the Patient is once gained they will sometimes work a Cure when other means have failed.

In those who Die in the Cold Fit, a quantity of Grumous Blood is generally found near the Heart, and a quantity of Water in the Pericardium, and Cavity of the Thorax, enlarged Liver, Spleen &c. and the Stomach much distended. If the Patient Dies in the hot Fit, the Apoplectic appearances, as Extravasation &c upon the Brain appear.

The Cure in general is not very Difficult, if the Patient is removed into a situation where the Disorder does not prevail; but it sometimes proves pretty obstinate particularly in Children when proper use of Calomel and other Purgatives are omitted, and the Bark

persisted in. — Vernal Agues are cured often by the most trifling Remedies, and often the Cure themselves without any assistance from Art. Those people who have raised a Name for the Cure of this Disorder are they who have been fortunate in giving their Trash, at a time when Nature was self sufficient. — Autumnal Agues are more obstinate & frequently resist the Use of the Best Remedy till Spring returns: — for the Spring often removes the Autumnal Complaints, and the Autumn often ends that Inflam.y Disposition which has kept up Vernal Diseases.

The Cure is either Natural or artificial: — natural when 'tis assisted by Nature either in rousing or restoring or evacuating what she would wish to expel.

When a Cure is effected by Medicines whose Operations cannot be explained, but which we term Specifics, here the Cure is Artificial. — The Bark effects an Artificial Cure, while Stimulants or Evacuants induce a natural one. — The natural Cure should be attempted as the most permanent & effectual & it consists of what I just before said.

It may be sometimes necess.y in the hot. Fit where the symptoms of full=

=ness, as Head-ach, Delirium &c. with red Eyes and increased motion attend together: but in general V.S: is not the remedy for Agues, but however may be proper at such times: We should forget 'tis an Ague we are about to treat, & if the symptoms require Bleeding, we shd lay aside all Prejudices, and follow the Indications of the Symptoms in this and all other Disorders, for 'tis not the Name of the Disorder, but the symptoms that are to guide us in Physic.

In the fit sometimes Inflammations form; indeed all Inflammations proceed from the hot Fit of Fevers. — Cautions should be used in Bleeding the Elderly in their Fevers. — We are to nourish & restore these rather than reduce them by Evacuations.

Blood-letting may be sometimes even necessary in the Intermissions; as when there is a violent pain in the head, and a tendency to a continual Fever or Delirium.

But to free Evacuations from the Primæ Viæ I hardly know any Exceptions — The best time to give an Emetic is, so that its operation may be over about an hour before the Invasion of the Cold Fit, for should it be given in

the Cold Fit when the Viscera are loaded with Blood, a Rupture of the Vessels would be endangered. — Nature often attempts to relieve by efforts to Vomit, which should be encouraged by suitable means, as nothing tends more towards the Cure of Fevers, than the nauseating effects of Vomiting, particularly in this Fever.

Sydenham's practice was always to give an Anodyne after the operation of either Vomit or Purge to allay the Ruffle the Evacuation had occasioned in the Habit; I think this method good and deserves attention; Ten or fifteen Drops of the Tinct: Thebaica seems best for this purpose.

Tart: Emet: I should prefer in this case for a Vomit diluted with Water in such a manner as to occasion a Nausea for a considerable time before it Vomits, and if it procures Stools at the same time, so much the better: — When the Tart: Emetic is diluted with Water, it will be proper to add a teaspoonful of Madeira Wine, which will keep it suspended and act as a tonic to the Stomach: — in short the Primae Viae should be washed out Clean; by this means the Symptoms will be much relieved and the Pat-

=cient more properly prepared for the Bark.

Nothing is more improper when you have given an Emetic, than to distend the Stomach too much during its Operation with Drinks &c.

In hot Climates the Saline Purges are the best, as Soluble Tartar, Manna &c; but in our colder Climate, Rhubarb, Jalap, Aloes & Calomel &c seem to suit the Best. — Laxatives are better than Violent Purges.

The Patient should not be allowed either in the Cold or hot Fit to Drink as much as his Thirst might seem to require, as by over distending the Stomach, by its pressure, the motion of the Heart would be interrupted, & a great sense of anxiety and oppression bro^{t} on. — Acids seem better fitted to allay the thirst than Diluents in this Case. — Cold should be avoided, and with equal care the Patient should not be loaded with too much Bed-Cloaths: — We should always have the Patients body dried with Flannels after the sweating Fit, and the Linen changed, to prevent an absorption of the Perspirable matter from them; otherwise, the Patient soaking

in his own foul moisture, such a degree of debility and weakness might be brought on, as would protract the Disorder and render the use of the Bark itself fruitless   Prior to the accession of the Fit, the Patient should be put to bed, and take some sipping to invite a Perspiration on the Skin &c — Lemon Juice will prove Sudorific sometimes and take off the Cold fit of an Intermittent. — During the hot Fit the Saline Draughts or Spt. Mind: seems particularly adapted. —— Another indication in the Cure of Intermittent Fevers is to bring on the sweating Fit without increasing the other symptoms: — For this purpose we should not use large quantities of Fluids as they occasion anxiety and difficulty of breathing: — For this purpose nothing is better than the Volatile Alkalies, as the Spt. Mind: &c, for these prevent congestions of the Viscera, to which the Patients in these Disorders are very liable: I therefore order Lemonade with a teaspoonful or two of the Spt. C.C.: — Rhenish or Old Hock Wine with Spt. C.C. may likewise be given with great advantage, or liquid

Liquors with or without neutralized Alkalies:— This method is much better than using Stimulants and Aromatics, as Pepper, Brandy &c as are too commonly done:— these when used endanger inflam^n of the Brain, Delirium &c.— Some have recommended Decoction of Guiacum, Sarsaparilla &c, for the same purpose; but as they are nauseous & sit heavy on the Stomach, I would not advise them;— when the Patient can use Excersice they will raise a Diaphoresis, but here they keep the tongue foul and seem to prolong the Disease.   If the Stomach is foul small Doses of the Antimonials are proper; they will sometimes occasion Vomit^g and Sweating, and as they are Deobstruent, they prepare the way for the Bark.   There is not any disorder for the Cure of which there are so many boasted Remedies, as for the present; & I really believe the good effects they often produce, are from the effect they have upon the Patients Mind, by engaging his Attention & gaining his Confidence: — from hence we may acc^t for the use of Amulets, Cobwebs &c:— but in Quinates, we have really a valuable Remedy; it shortens the Duration of the hot fit, abates its Violence, occasions early

Sweating, Quiets rest, & finally carries off the Fever better than any thing else. — Dr Lind at Portsmouth says after Opiates the Bark is more successful: — & Visceral Obstructions never follow after the use of Opiates. — The time for exhibiting them is in the beginning of the hot fit, as Opii gr: j. — but if the pain of the Head is great & Delirium attends, then Opiates should be omitted, as it does not relieve this kind of Delirium; but if the head is not affected then gr: j of the Extr: Theb: will render the next intermission more perfect and the present fit less violent: — Doctors Collin & Gregory of Edinburgh have made this the settled treatment of this Disorder in Scotland. — In quartans where the Bark did not succeed, Opiates have often helped it much; nothing is better calculated to prevent a return of the Paroxysm.

— In warm Climates Opiates are exceeding proper to prevent the disease running on which soon weakens the Patient, and when Opiates are used Jaundice, Visceral Obstructions & Dropsies never follow. — Dr Lind says all we have to do is to prevent Costiveness, by proper doses of the Tinct: Sacra: — thus much for the natural Cure.

We shall now speak of that which is artificial and this effected by remedies whose action we cannot explain & which we call Specifics, a term often abused; but which we are

obliged to use, as we have not a better.

And first the Bark; — as we shall give the full Character of this Valuable Remedy in our Materia Medica, I shall only observe here that previous to its use we should always premise Evacuations and particularly Vomiting; for after the Stomach is thoroughly cleansed by this Operation, the Bark will be more thoroughly digested and sooner Cure: — it may be used early in the Disorder and in large quantities; nothing more needs be attended to but the Exhibition of an Emetic before we begin with it. — The manner and time of giving it should be attended to; the nearer we give it to the expected Paroxysm the better; therefore we should get down as much as possible just before the Fit is expected: — 'tis better to give it in this way than in the Paroxysm, tho' it may effect a Cure, but the Paroxysm is likely to give way: — indeed I do not think it proper to do any thing in the active Paroxysm of any disorder, unless the Violence of the Symptoms endangers the Person's Life. — The form in which the Bark should be given has been said much about; — Boluses and Elect^o of it I think should be avoided as they clog the Stomach and sit heavy; half the quantity in Wine or any other fluid is better than any quantity in the form of an Elect.y; — to break × dissolve the Elect.y requires more Strength of the

Stomach, then even the Digestion & the Bark itself.

Bark does not give out its best parts in Simple Infusion:—This preparation may be proper in Chronic Cases, Indigestion &c. but for intermittents the Decoction should be used; which, should not be suffer'd to stand and cool before it be strain'd off and pour'd into the Patients Phial; but it should be kept up hot; or otherwise by standing to cool the Resinous parts of the Bark are precipitated to the bottom, and the Medicine is much weakened— The Tinct: should be added to the Decoction to supply the Resinous parts that are lost.

Dr. Pye recommends the Application of the Cortex to the Skin in Children when we cannot give it internally; likewise it has been administered to the Bowels with success.

In low Fevers tis a good way to give the Bark in Red Wine; which is both a proper Vehicle and assists the Operation of the Bark itself, for a fluid is much better than a Solid form.

The proper quant.y to be given cannot be determined, but I think if we can get down an ounce between the Paroxysms, so much the better for its action is proportioned to its

quant. g: — always crowd down as much as you can towards the return of the Paroxysm, omit it in the Fit, and then begin with it again & go on with it freely towards the next Fit: — if the Bark sh. purge, it should be corrected with a few Drops of Tra Theb: — if the Patient is costive and in a cold Country, a little Rhubarb ~~or~~ Aloes may be used; but in Warm Climates the Crem: - Tartar; Tart: Solub: &c are the best, as they evacuate the Bile thoroughly.

Many endeavour to make the Bark palatable, and for this purpose use the Ext: Glycc:, or Decoct: Campechensis; — I have known the bark given in Sour Milk to Children and they did not taste it: 'tis always better to remove the nauseous taste of a Medicine if it can be done without hurting its quality.

When in intermittents a Cough or difficulty of Respiration attends then I use Et fluida Sal. Ammoniac with the Bark; it is better than the Sp. Minder: in full Habits, when we are afraid of blocking up the Secretions, & here comes in the use of ye neutral Salts.

If there be a tendency to Anasarca or Dropsy from frequent Paroxysms, which have greatly reduced the Patient, we should us the Bark

with other Bitters, as the Gentian, Chamomile &c to prevent their return.

If there is a tendency to Putrefaction Acids sh.d be combined with the Bark, as the Elix.r Vitr: Acid: &c according to the Judgment of the Physician. Many other Remedies have been substituted to the Bark, but as none of them are to be compared to it, its use should not be omitted for the best of them.

When the Vis Vitae is exhausted, then the Patient should take the Rad: Serpen: Virg: with the Bark, which is one of the best Cordials: the Bark acts as a tonic, the Rad. Serpent: as a Stimulant &c as per D.r Lind — and then when instead of the Cold Fit convulsions or fixed Pain attend Camphor should be used with the Bark, tis a common Custom. In periodic and Intermitt.t Pains, nervous Head aches; particularly in Women who are Pregnant, the Bark has been commonly recommended, but I think Camph.r and V.S. generally give more relief: —

We should always Consider how far these disorders depend upon a Plethora or Irritability, for it is in the last the Bark is more proper; but always where the Bark is proper V.S. is improper and Vice Versa. —

In Germany they Cure their Agues with Tormentil Root. —

Lecture 16

Of Inflamation in General. —

In treating of this affection, I shall take notice of its Causes, Nature, Diagnostics, Termination and cure.

In every Inflamn. of a particular part, there is Tumour, Redness, Pain, and for the most part a shining appearance: — The Pulse is quickend: — there is a considerable thirst, Pulsation in the part affected, and the Blood when drawn exhibits an inflamy. appearance.

It however frequently happens that Symptoms of Inflamation appear in general in the system when no particular part can be assign'd as the Cause, and produce acute & inflamy. Fevers, which are always attended with an increased circulation & shew the Vis Vitae to be enforced beyond its due bounds. —

The Causes of Inflamn. are many &

various; — every thing that Stimulates and excites a flow of Blood to a particular part may be cause of Inflamn.; — hence it is that Mustard seed, Cantharides and Horse Raddish produce it.

Obstructed Secretions, as Perspiration, Cold, Excess in the non-naturals, external Violence, Blows, Bruises, Wounds &c. — Sublimate, Arsenic and other Chymical Poisons produce it.

A translation of acrid matter from one part to another; thus the Pus of an Ulcer in the Lungs is often carried to the Liver, there producing Inflammation, — this is called a Metastasis.

Having enummerated the various Causes of Inflammation, it will now be necessary to explain its Nature, and shew in what it consists.

Several Hypothesis have been formed ~~to~~ to this, the chief and most recieved of which is Dr Boerhaave's, who supposed it to depend upon an obstruction in the Vessels of the Inflamed part. — This opinion however is entirely exploded by many very eminent Men in the Profession, who affirm that it consists in an increased Circulation thro' the minute Capillary Arteries of the part affected. — Increase of heat argues not an Obstruction but an increased oscillatory motion of the Vessels, which must propel their Contents in

proportion to it. — The Pulsation of the part, which is much quicker and which does not correspond with that of the Heart is also another argument to prove this increased Circulation. — Was the Cause an Obstruction, — the part would not have a sensation of heat but of Cold, since the very term argues a ~~stagnation~~ a slow circulation in the part, of which, Cold is always the Consequence. D^r. Monroe of Edinburgh has however explaind the nature of inflam:^{n} as consisting in an increased Circulation in the part almost beyond a doubt: — he laid a Muscle of a Dog bare, and bro^t. on an inflam:^{n} by the application of a Stimulus; — upon an examination of this Muscle by the help of a Microscope, he very plainly discerned an increased motion of the ~~Vessels~~ Fluids thro its vessels:

This increased impetus of the Circulat:^{n} throws the Blood into the serous arteries or Exhalants, which are destined only to convey the Lymph or finer transparent aqueous parts of it.

This is seen in Opthalmia's, when the Vessels of the Tunica Conjunctiva which were before invisible appear to be filled with red Blood; — it is this cause that produces the redness in an inflamed part

Another circumstance attending Inflama:^{n} is an Effusion of a Serous fluid into the cellular membrane, which produces the Tumour, and growing at length acrimonious from its sit-

-uation and degree of heat degenerates into Pus.

All Inflammations terminate either by resolution, Suppuration, Gangrene, & if it be a glandular part — Schirrous; which again degenerates into Cancer.

It is said to terminate by resolution when the Cause of the Increased Impetus and the degree of heat thereby produced, and this Impetus no way decreases in violence, it at last distends and destroys the Cells of the Membranous disp: and parts adjacent, and by Stagnation, Heat and the exclusion of the external Air forms what is called Pus — bursts the Integuments and terminates in an Open Sore; which determination is denominated Suppuration.

It often happens that the Inflamm.n & Impetus of the Circulation, will increase to a very great degree, becoming so violent as to destroy the parts themselves, forming an extravasated fluid or Ichor of a peculiar virulent noxious nature which destroys the sense of the part and produces Death within a few hours; — this is termed a Gangrene; the nature of which we do not well understand.

When an inflam.n affects the Glandular System they become indurated, forming Schirrous; which suppurating degenerate into Cancer.

The most desireable termination of Inflamation is in general by Resolution: it is always best if it can be effected in internal Inflamations, but is not always proper when it is seated externally.

Resolution is to be attempted by emptying the Distended Vessels, and diminishing the force of the Heart and Arteries, and consequently of the Impetus of the Blood thro' the inflamed part. The most certain and effectual method of doing this is by Bleeding: the Blood should be drawn in a large quant.y from a large orifice and in a supine posture, by which means the Evacuation will be much more successful, — it should also be repeated and several times if necessary. Next to General Bleeding, topical sh.d be used, and is far more effectual in in particular Inflamations than the former: — it is to be done by the application of Leeches, Cupping Glasses &c to the neighbouring part. — Nor is there any thing in Nature which tends so much to abate Inflam.n & produce a Resolution as emptying the Vessels of the part affected by such methods. — Besides these there are other methods to be attended to in producing Resolution; plentiful Dilution should be encouraged; and the fluids made use of for this purpose be well acidulated with some Vegetable

acid, as that of Lemons, Oranges, Limes, Vinegar &c; acids having a peculiar property of abating Inflamⁿ. — The Saline Draughts and Antimonials will be of use to abate the Inflamⁿ. & produce a Diaphoresis. — Neutral Salts are excellent in producing a Resolution, particularly Sal: ammoniac & Nitre; the last of of which shᵈ. be given in much larger doses than are commonly given, if the Stomach will bear it; if not, in smaller & repeated Doses. — The best method of administering Nitre so as to render it most agreeable to the Stomach is by mixing it with an equal quantʸ. of Sugar. — The Body must be kept open at the same time with antiphlogistic Laxatives, as Manna, Glauber's Salts, Tamarinds, Elect: Lenitiv: — Fomentations applied to the part by relaxing and taking off the tension will assist Resolution, but what is much more efficacious is the Vapour of Warm Water applied to the part: — the relaxing quality of the Warm Water in Fomentations will be much assisted by the addition of Marsh-mallows, Hemlock & other Herbs. — The application of such Medicines as tend to abate the Irritation in the part, will be productive of considerable service; Hemlock, Poppy-heads; Saturnine Preparations, as Goulard's Cerate or the like. —

Poultices will assist the Resolution as well as suppuration of the Tumours, if applied early & assisted by Bleeding, Laxatives &c. — Vinegar applied by way of Poultice will be found very advantageous; one of the best forms I have given in Syllabus N°. 37. — Sp^t. Mind: applied either in form of Vapour, or dropt on a paper, is possessed of considerable efficacy in producing Resolution, and is the Nostrum which rendered the late D^r. Ward so famous in the Cure of Inflammations, particularly those of the Testes. — Vomits will have a good effect if the Inflammation be situat^d. below the Stomach by producing a considerable Diminution of the Nervous influence, and causing a greater flow of Blood into the higher and more superior parts, and consequently a decrease in the inferior. — Upon this principle it is that Emetic's are so generally useful in the Hernia Humeralis or swollen Testicle, Inflammation of the Kidney &c: — and upon this principal also that an Emetic would increase an inflam^n. of the Brain and other superior parts. — Vomits would also be useful upon the principle of Promoting Perspiration.

Sedatives tend to abate Inflam^n.

by diminishing the Irritation & may in some Cases be used to advantage, but should be particularly avoided in the Gout. — If the part be bathed with Laudanum or any other Opiate, about an hour before the application of caustic, the pain attending its Operation will be very considerably increased.

Exciting Inflam.^{n} in the neighbouring parts is often serviceable by deriving a portion of the Nervous influence and part of the fluids from the former Phlegmon; — hence Blisters are serviceable in Pleuritic Cases; — the Phrenitis & the external application of Sp.^{t} C.C. in Angina's.

Having treated particularly of the general symptoms and principles on which we proceed in order to procure Resolution — we shall now proceed to the next Stage or Suppuration.

The Symptoms preceding Suppuration are generally an acute pain in the part, Shivering and Cold Fits; — I have before fully explain'd the nature of Suppuration, therefore shall only mention an Exper.^{t} of Dr Pringle to prove the theory there laid down; — he exposed a quant.^{y} of Serum to an heat equal to the animal in a close Vessel, and observed that it assumed every appearance and property of

Pus in a few days.

A Suppuration being brought on by increased circulation, Heat &c. it will be necess^y to proceed in a Plan different from that before described and rather tending to increase the Inflam^n by a generous Diet, Wine &c, topical stimulating applications applied to the part, as Cataplasms of mustard Seed, Onions, volatile Epithems or other such like applications.

When by these means a fluctuation of the Contents is perceptible, they are to be discharged by Surgical Assistance —

Lecture 17th

Of Inflammation in General (contin^d.)

Internal suppurations are of four different Species — 1st Pus formed in a Cyst called an Abcess, — 2nd Ulceration without previous Abcess — 3rd a White Gelatinous Fluid exuding from all membranous parts. — 4th a Purulent infarction of the Viscera, or a total dissolution into Pus.

The first kind of suppuration is generally produced within seven days and is

the Materia Morbi which is translated from one part to another by the Metastasis.

The second Species of Suppuration seldom happens but in case of Wounds, tho' indeed of this kind is the Ichor distilling from Cancers, & I believe I may say the purulent discharge of a Virulent Gonorrhea.

The third, is the true Cause of the Adhesions of one part to another, particularly membranous parts as may be often observed in the Thorax & Abdomen where the Lungs are found inseparable from the Pleura without considerable violence; — the Intestines likewise are extremely liable to these adhesions.

In the fourth Species the Viscus seems to be totally dissolved into a Purulency, which happens mostly in the Lungs, Liver & other parenchymatous Viscera.

The termination of Inflammation by Gangrene is to be apprehended when the Pain & Inflammation suddenly abates without any sensible Crisis & relief of the symptoms and is said to be present when the tumour assumes a brownish colour, the integuments near it are loose, the impression of the Finger remains and the part by degrees approaches to a Black, losing at the same time all kind of sensation. — Pustules

or rather Vesications appear upon it, containing a yellow fluid & an extremely foetid noxious Odour & Effluvia are thrown off.

It now spreads and affects the adjacent parts, cold sweats appear, the Pulse becomes small & quick, Hiccup comes on & Death soon after closes the scene.

A Gangrene of internal parts is seldom cured, & even if externally situated but arising from an internal cause, — with great difficulty. The extreme parts are more liable to this Termination than any other, the Vis Vitae & circulation being in these parts more weak & languid. The indications of cure will be first to check the progress of the Gangrene, and 2.dly to promote the seperation of the mortified parts.

The bitter Antiseptic Herbs &c, will be of great service in effecting the former by way of Fomentation. — of this Species are Chamomile Flowers, Wormwood, Southernwood, and above all the Bark. — Oil of Turpentine, Tinct: of Myrrh. Incisions and scarifications will jud:y promote the latter.

The Haust: Salin: applied during the effervescence to the part are said to be extremely serviceable in abating the progress of Gangrene, it is a hint which was first thrown out by Dr.

M'Bride in the Course of his Experiments, and certainly merits a trial.

The internal use of the Cortex is the most sure and certain method we have of stopping a gangrene; but will be prejudicial if Inflammation is the Cause, and should rather be used in cases where the Disorder comes on from weakness of the Powers of Nature. — When necessary it is to be thrown in in large & repeated Doses till the Stomach nauseates it.

When the Pain abates and no sensible crisis is produced, an Hardness and sense of weight in the part is percieved, — in this case the inflamn. is said to terminate in Schirrous. ——

When schirrous suppurates it degenerates into a Cancer or open Ulcer discharging a thin fœtid Ichor & corrosive. — In this Case very little can be done, the Bark, Sublimate & Cicuta are the Medicines which bid fairest to succeed. — Preparations of Arsenic are used X it is said with good success, which they seem to effect by producing a copious discharge from the part. — The Basis of Dr Guy's application is a Preparation of Arsenic. — I have often known the application of the Vapour of Warm Water of great service in resolving Schirrous

Tumours.

Having treated of the various Species of Inflam.n & their terminations, it may not here be amiss to enumerate the Causes mostly productive of them. — The most general of which is obstructed perspiration from the external application of Cold. — Obstruction of any other ordinary Evacuation. — Violent exertions of bodily strength. — Eruptions repelled, as in the Gout, Erysipelas &c. — Too great heat as is the case in the Phrenitis of hot Climates. — Too free use of Sp.t Liquors: — Drastic Purges, as Aloes, Gamboge &c. — Poisons which depend on Chymical Combinations. — Blows, Bruises, — Wounds &c.

The Pain attending inflam.n depends entirely on the Nerves sent to that part, and it is very remarkable that membranous parts are more painful than others: — Thus the Pain in a Peripneumony is not so great as in a Pleurisy.

When an inflammation of any internal part suppurates and the Pus is discharged into a Cavity as that of the Thorax or Abdomen, an hectic Fever ensues from the absorption of the purulent matter, and very often kills the Patient.

Of the Erysipilas

The Erysipilas is a Species of Inflammation to which elderly People & women whose Catamenia are obstructed are more particularly subject: — it is often hereditary like the Scrophula; and indeed I have known more instances than one where almost every person belonging to a Family have been from time to time affected with it, — those who have once had it being extremely liable to a relapse.

This inflammation very often attends Wounds and Ulcers particularly following Punctures of Oedematous Tumours, and always argues a Predominent acrimony, bad Digestion & Difficult Cure. This Species of Inflammation does not seem to be dependant on the increased Impetus of the Circulation & other causes of Phlegmon or suppurating Tumour alone, but to a peculiar acrimony of the fluids also.

The inflammation which succeeds the Sting of a Bee, Wasp &c, — the bites of Venemous Animals, Vipers, Spiders, Tarantulae &c, the Sting. of Nettles, Knats; application of Spt. Sal: Ammon:; Blisters, Sinapisms, Scald and the like is of

this kind; and in short whatever tends to produce inflamn. in general will in some Habits be the Cause of an Erysipelas; which is a strong proof that this Species of Inflamn. does not depend upon the Common causes of Phlegmon only, but to a peculiar acrimony.

The Erysipelas is a species of Inflamn. which seems to be seated in the Cutis only and not in the Cellular membrane, as in the Common Phlegmon: — it is not limited but spreads more or less without tending to a point: — its duration is extremely uncertain, sometimes terminating in four or five days but often proves more tedious: — the Colour is also various; — at one time a pale red colour, at another purple, livid, brown or even black: — its surface is generally smooth, but sometimes rough & covered with small Vesicles, like the Sting of Nettles.

The Tumour itself is not Oedematous but is often surrounded by an Oedema: — it is extremely painful and if large attended with an acute fever, similar in every respect to the common inflamy. Fever, which terminates in a few days on the Eruption, — tho' it often happens that the Fever follows the Eruption.

Whenever the Fever terminates there is always some noxious particles thrown off from the Habit; either from the Emunctories

of the Body, or which is mostly the case from the part itself, in form of a moist, tho' sometimes dry nearly of a Furfuraceous appearance on its surface.

This Fever or inflammation of a particular part always terminates in Resolution or Gangrene and is most prone of any to degenerate into Gangrene. If the pain & fever abate suddenly without any previous Crisis, and the Tumour spreading becomes Oedematous, — a Gangrene soon follows. The fever is observed never to abate if it existed before till the Eruption is compleated, and is always of the Inflamm.y Kind and attended by a great dejection of Sp.ts, Anxiety, oppression of the Breast, Precordia, red fierce Countenance, — Eyes prominent & inflamed, — quick full Pulse — Watchfulness and not seldom a Delirium.

The parts most liable to this Inflam.n are the Hands, Face, Arms, Legs &c — seldom appearing on the body or thighs: — Dr. Sydenham & Van Swieten have ment.d Cases of Erysipelas extending over the Whole Body attend. with Vesications: — these are very rare instances; nor did I ever see an Inflam.n of this kind near so general.

It is this Species of Inflammat.n

which affects the Pleura, Mediastinum, Intestines &c; hence the latter are so exceedingly liable to Gangrene. — The Gangrene of a Sore throat also is the Gangrene of an Erysipelas. When this Inflammation shifts as is often the Case from the internal to the external parts, there is but little Danger:- if therefore we can procure ~~a~~ this translation of the Materia Morbi from an internal vital part by art, we shall remove the Disorder of that part.

Hence the use of Blisters in Pleurisies, — they procure great relief by raising a similar Erysipelatous affection externally, thereby deriving the Materies morbi & nervous influence from the part within.

It is observed in general that the nearer the affection is to the Head, the more violent & dangerous are the symptoms & Vice Versa.

The Cure of this Inflammation always consists in Resolution & correcting the acrimony:- in order to effect this - Bleeding is indicated & sh.d be repeated more or less according to the symptoms*: — the body is to be kept open only by Glysters or antiphlogistic Purges.

It is observed to be much easier to effect

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* The D.r observes that Erysipelatous Inflamm.s in general do not by any means [illegible] as well as

a relief in the Topical than in the general Inflam:
and one reason assigned for it is that the Stomach is
capable of recieving & retaining more Medicines — &
indeed there is a particular advantage in this in
the Exhibition of Nitre — a Salt strongly resisting
Inflammation & promoting its resolution. — For
the same purpose the Saline Draughts will be particularly useful. — We are to avoid external astringent oily or repellent Medicines, since their
application will produce an effect worse than the
preceeding disorder; for the consequence of a Repulsion is constantly a return of the symptoms preceding Eruption — Anxiety, Delirium &c — Oily
applications serve no other purpose than to obstruct Perspiration in the part & cons~~tant~~equently the
discharge of the acrid matter, which on the contrary should be absorbed by the application of
Chalk, Oatmeal, Flour, Starch &c, which may be
either used with advantage, especially Starch.
— Fomentations will be of service if they consist
of Watery particles, only without the addition of Oil.

Dilution is to be promoted by such
thin Demulcent Drinks as have already been
mentioned in other Inflammations: — Equal parts
of Spt. N. D: & Spt. Sal: Ammon: Dulc: diluted with

a — species of Inflam:

Water and sweetened with the addition of a little Sugar, make a very agreeable & proper Drink.— These if not the same make a liquor in every respect similar to Mr. Suttons Punch which he has as a constant Diluent —.

If the Inflammation suddenly disappears and the Head becomes affected — Blisters to the part first affected will be of very considerable service in order to produce a return & discharge of the Acrimony from the part again.

When Gangrene supervenes — the treatment ment.d in the former part of this Lecture will be of service.

Having now spoke very fully on the different Species of Inflammation in general — it follows next of course that we treat of Inflammation of particular parts.—

Lecture 10th

Of a Phrenitis, or Inflammation of the Brain.—

A Phrenitis is an acute inflam.y Fever arising from an inflammation of the Brain or its membranes, and attended with Head-ach, an early Delirium, ferocious aspect

inflamed Eyes, great Heat & thirst.

In this Country its oftener a Symptomatic than Idiopathic Disease; — and indeed a Delirium is one of the first symptoms attend acute Disorders in Warmer Climates.

When the Pain is very acute, attended with a quick hard Pulse, we have reason to think the Membranes of the Brain only are affected, as we know inflammations of Membranes in general are attended with much more pain, Fever and danger than other parts, as in the Pleurisy, Paraphrenitis &c: — from the same principle we most probably imagine the Brain itself to be primary affected, if the Pain be dull & obtuse with Stupor.

The Causes of an Inflammation of the Brain may be any of the causes of Inflamⁿ in general, more particularly drinking Spirituous Liquors, violent Exercise, or in short any thing which tends to derive a greater flow of Blood to the part affected: — hence nothing in nature can tend more to encrease an affection of this kind than an Emetic.

The Cure will consist in early & proper Evacuations particularly in V.S. and that in the Jugulars and temporal Arteries & Leeches to the Temples in preference to gen=

ral Evacuations from the Arm.

Fomentations to the Head may be of service as they derive a quant.y of Blood to the external parts. Cupping Glasses to the part — Blisters have also their advantages, as has the Antiphlogistic Regimen in general.

The Head must be kept in an erect posture with a view of preventing a flow of Humours to it and at the same to accelerate their return.

Sinapisms to the Feet & Blisters to the external parts will often be attended with much advantage. It is with the utmost caution that we should have recourse to Opiates in this Disorder, as they will rather tend to increase the Disorder by rendering the Body more susceptable of Irritation after its narcotic effect is past.

Opiates then are only necessary when the Pain & restlessness are owing to an increased Irritability — which is so nice a distinction as to render its use in general unsafe even by the most eminent Physician.

The inflammatory Sore throat, or Angina Infl.y

In this disorder the Uvula & Velum Pendulum palati are affected. — Deglutition is

impeded, and there is a degree of Fever; which last is sometimes the consequence and sometimes the cause. — Whenever the Fever is the Cause there is always a degree of Chilliness in the beginning; we should always be cautious in inflamations to find out whether they are the Cause of the attending Fever. — The Tonsils appear affected, the Uvula enlarged & from being inflamed become elongated. — When the disorder is seated lower down the Breathing & Voice are affected & there is frequently great pain in the Eustachian Tubes, which extends to the Ear and gives [illegible] Pain to that organ, which is generally complained of.

Patients who have once had this Disorder, are most liable to a relapse; and this is the Case in all inflam.y Disorders, particularly the Rheumatism.

It generally begins with Rigor followed by heat, difficulty of swallowing, white tongue, and is a good symptom to distinguish the inflam.y from the Putrid by. — There is a violent pain in the head, & if the inflammation in the throat is neglected, it will go on to Suppuration, which happens generally at the Angles of the Tonsils & not in their body — as the Tonsils are Glands which very rarely suppurate — Delirium & violent Head-ach are bad symptoms. — With the internal pain in the throat

There is sometimes external tension & Redness.

The passage being blocked up prevents swallowing & endangers Suffocation.

In these Disorders Nature affords relief by large Secretions of Mucus from the neigbouring parts; which, should be promoted.

These symptoms often follow from the Confluent Small Pox & Measles, particularly from the last: — in these Cases we are apt to suppose the uneasiness arises from Pustules — when on examination none are to be seen.

The Causes of this Disorder may be the exposition of Cold externally — or its application to the parts within.

Cure.

Copious & early Bleeding should be used; but Bleeding from the Tonsils is better than from any other part: — when the Disorder is local and no rigor has preceeded, local Bleeds are best, as under the Tongue, on the Tonsil, or wth Leeches &c. — The Fever, Symptoms, Constitution &c must determine the quantity.

The Steam of hot Water admitted to the parts is good — it invites the secretion of Mucus, allays the Tension & promotes Resolution.

Costiveness shd be remedied by the Saline Purgatives which are best in all inflammy Diseases: — they should be given in a Bulky form,

that is, a dose of the neutral Salts in ℥xij of Water given by spoonfuls till it operates: by this means it evacuates more thoroughly & does not give the Constitution that Shock as when undiluted in a full Dose.

Blisters to the Throat promote Resolution, but if the Angina is slight we need not have recourse to such active Remedies — but if the Patient has been often subject to the Disorder & it is going on fast we sh.d immediately have recourse to Evacuations, Blisters &c.

Astringent Gargles sh.d be continuously avoided for tho' they may abate Inflammation yet they keep up the Tumour. — I have often known after the use of Aluminous & astringent Gargles in these inflamm.y Cases a hardness left for a long time.

The best Gargles in my Opinion are the Sp. Minder: in Aq: Hordeat: — or the Mel: Rosar: in Decoct: Pector: — but the Sp. Mind: is the best to attenuate the Mucus & by its gentle Stimulus to promote its Secretion — or the Mel Rosar: ℥j Decoct: Pect: ℔j ss.

Small doses of Antimony sh.d be used in the beginning.

When much Tumour &c — use Emollients — for by relaxing the structure of the Skin they afford great relief.

If Gargles can't be used, small

quantities of Nitre may be repeatedly dissolved on the Tongue &c.

Likewise the internal use of Nitre should not be omitted.

But early Evacuations by Bleeding, Purging, Blisters &c — with small doses of Antimonials & the steam of Warm Water are the best remedies.

If the passage is block'd up so as to prevent swallowing & endanger suffocation; in these dangerous situations I have often saved my Patients life by ordering a Lancet to be plung'd into the Tonsils, or other inflam'd parts; — & when no matter & nothing but a teaspoonful of Red Blood has follow'd, it has afforded great relief, and shd. always be used in these urgent cases.

Vomiting in some cases may be necessary in the beginning of the Disease — but should cautiously be avoided when the Inflammation & Tumour is great, as by drawing more Blood upon the parts it may increase the disorder.

The free discharge of Spitting &c comes on — you should only act the Spectator & nature will perform the Cure.

In whatever stage of the Disorder you are called in, if inflammy. Symptoms attend, you are to forget the Day of the Disorder, & if the

symptoms require Bleeding, always be govern'd by them; for nothing can be more absurd or dangerous than the Rules given us in some Writers (Viz) that we are not to Bleed after the fourth Day in inflam.y ~~fevers~~ Disorders; as every day may produce new inflammations, as Rigors shew: — we should Bleed when a careful attention to the symptoms shall shew Venesection necess.y — either if it be early or late in the Disorder.

Lecture 19th —

The Putrid Malignant Ulcerated Sore throat or Angina ~~Maligna~~ Putrida

Or more properly the Putrid fever with Ulcers upon the Throat; — for the Fever is the original disorder, & in this is often Endemic & contagious.

This Disorder appear'd in Spain in Anno 1610 — then in Naples in 1618, where it contin.d for 20 years when Turnfort wrote the best History of it that has been published. — It was called in Italy Morbus Strangulatorius.

It first made its appearance in England in 1739 when it attacked two Children of a Noble Family who both died & began to alarm

The Faculty — ~ In 1742 & 46 it was really a formidable complaint. — There was no regular treatise Published upon it till 46 or 48 when Dr. Fothergill done it.

This disorder is more frequent *now* but less malignant; few die with; no adults and but few Children. — Formerly it was looked upon as an Autumnal Disease — but now it comes at all seasons; but I think it is more frequent in dry and hot summers. — Children are more subject to it than adults, Girls more than Boys, the Women than Men — & the most infirm of either sex, than the firm & robust. — It seems to be communicable by the breath &c — therefore we ought not to suspend our head over the Patient.

The symptoms are very distinct and clearly mark it. — it comes with Giddiness - Headach — Alternate heats and Chills - some sensation of heat in the throat rather than pain — with a fullness in the Anterior part of the throat — a Stiffness and pain in the neck: like other putrid Diseases there is a frequent Vomiting & Retching — and sometimes a tendency to

Diarrhea; often both together.

(If Vomiting or Diarrhea comes on in the beginning of any Disease — they ought always to be encouraged, as the Operations of Nature are seldom bad founded)

There is a great Dejection and Prostration of Strength & Spirits — and that Deliquium upon sitting up which attends in all other Putrid Fevers.

In this, no Disease appears upon the Throat for two or three Days: — and when little Aphthous Specks appear upon the Uvula, Fauces &c. the Eye is swollen and Watery, which & from a Rash upon the Skin — the Disorder is often taken for the Measles: There is likewise great restlessness, — Anxiety, — & Despondency. — In this, the Inflamn. of the throat appears of a bright cinnaber Colour; & there is a lesser degree of Tumefaction in the throat than in the Angina Inflamy.)

The Patient is worse towards Night, and is commonly relieved with a gentle Perspiration, towards Morning.

There is often a thin Ichorous discharge from the Nostrils, so very acrid as to excoriate the Hands and other parts.

The Inflammation appears to be seated upon the Angles of the Throat, Tonsils &c. — first a

bright spot is seen in the Throat: — in a few Days there is the same appearance upon the arms, Breast &c — (but seldom upon the lower extremities) as if they were dyed with Red Wine. — Sometimes there is an Itching red Rash affording no relief. — Under the White Spot little Ulcers are found, in some deep, and the reverse in others: — in this as in all Aphthous complaints, the more distinct the Ulcers the more favorable.

The Parotid Glands are often swelled and very painful to the Touch — with Oedematous swellings in the Neck & Throat.

Towards the night the Patient is generally Delirious with Red Eyes — a Delirium somewhat peculiar — he answers Questions suddenly & then quickly begins talking again &c. muttering to himself with restlessness &c there frequent Flushings in the Face; which shews a great Flow of Blood sent to the head.

There is no regular termination of this Fever for sometimes it kills before the third day, and sometimes no symptoms of relief appear before the 7th —

In attending to this Fever if we find the Sloughs cast off kindly — the Fever abating — Rest &c returning; — these are good

symptoms.

The Pulse are quicker in this than I have observed them in any other Disease whatever; — 120 is a moderate Pulse, but in a Child six years old I have found them at 160.

The Crassamentum of the Blood is loose and the Serum is of a Yellow Colour, & the Urine mostly Pale: — when it is turbid and has a Sediment it is favorable.

There is but little thirst — the Tongue is moist but not very foul — and there is not so much difficulty in swallow.g in this as in the inflam.y Sore throat: — but if the Patient is obliged to Cough when swallowing it shews the parts ulcerated low down.

There is a very offensive smell from the nostrils & mouth — with Ichorous discharges; — the Acrimony of which falling often endangers bad Diarrhœa's.

In the Heat of this Disease if the Patient is attacked with Rigors &c. shew some internal mischief as a translation from one part of the body to another more noble.

In this Disorder the Menses appearing afford no relief, but on the Contrary in this as in all other Putrid Diseases — Evacuations of this kind hurt.

But Eruptions resembling the Measles sometimes afford relief, — while those resembling Flea bites & not rising above the surface of the Skin — with all kinds of Petechial Eruptions are bad.

In this Disease the Pulse is always quick, — in a Child 170 — and so in proportion as they advance towards Puberty.

A Disquamation of the Cuticle is a favorable appearance.

Rigors in the advanced Stages are bad as they are in general accompanied w.th a Retrocession of the Eruptions.

The Eye appearing dull & sunk, with Pale Urine & Hiccups — Gulping &c are generally fatal.

Profuse sweating and other involuntary discharges are bad in this as in other Fevers.

Distinct Apthea's are favorable, — but if the parts are covered over it is very unfavorable.

Likewise in this as in many other Disorders, I have observed that I cannot explain — Viz. that a few hours before Death the patient appears much alter'd for the better.

This kind of Sore throat has been mistaken for the Inflam.y Species; but I never pay much attention to the throat, but to the other

general Symptoms in forming my Judgment.

The general terror spread by Dr. Fothergill's Error has led many to think that every complaint of the Throat is of the Putrid & malignant kind; — but if the general symptoms & malignity do not attend, you must attend to the particular appearances upon the Throat as this is only secondarily affected.

Cure of ye Malignant Ulcerated Sore throat &c.

In this Disorder we are to attend to the same Rules I laid down in putrid malignant Fevers — for the Fever should be more attended to than the throat.

All active Evacuations should be carefully avoided, particularly V.S. — But under particular circumstances of the Inflamy symptoms, full Habit &c a few ounces (four) may sometimes be taken away. — In common, topical Bleeding by cupping and Leeches ansr. better than general, as it does not weaken the patient so much.

When a Diarrhea comes on it has been an usual custom to suppress it immediately to prevent its weakening the Patient, and for this purpose Spec. e Scord: with Rhubarb — Julep e Creta &c have been commonly employed: — but I cannot approve of this Practice altogether; — I think it better to give Rhubarb alone, or Manna with Soluble Tartar, and rather

to promote this Evacuation by Emollient Glysters &c.
For I never I never saw a Case where Diarrhoea coming on early, do any harm; — it is generally an effort of nature & should be encouraged rather than checked,

A Diarrhoea comeing on the advanced stages of Fevers is generally from the omission of Emetics in the beginning. — A Vomit should be given, by this means a great quantity of noxious humours are discharged — and by its action the useless Diarrhoea is generally moderated, while it has not the least tendency to disturb nature's salutary efforts by the Bowels or any other way. — By an early Emetic you throw off much contagious matter, while at the same time you open the Skin — particularly if Ipecacuanha is used, which is the best; and the great advantage of this I need not mention.

The Primae Viae should be always emptied in the beginning of these Disorders — particularly by Vomiting: — when the Patient is first seized with vomiting I always exhibit a few grains of Ipecac:, & with advantage.

In these Disorders much is said upon & expected from Gargles; — but they appear to me not radically to affect the Disorder: — but certainly it is best to keep the parts clean, and this is best done by the Mel: Rosar: & Aq: Hordeat: — but if ye sloughs are very large and hard to seperate, — I have used a Decoction of Rad: Serpent: & Contrayerv: which by its gentle stimulating and antiseptic Qualities

is very serviceable. — Upon this principle the Infusion of Sage with Serpent:, Contrayerv: & Acet: is used. — Mel: Rosar: with astringents sh.d be carefully avoided.

In Children Gargles are with difficulty used; — hence to supply this defect, Syringes have been used with great advantage: and I have known this method ans.d extremely well in young Children both by cleaning off the Mucous and foulness, and promoting the secretion of the former. — By throwing the Gargle immediately on the foul parts, we dont put the muscles about the Throat in ~~full~~ action.

The Decoct: Pector: c Mel: Rosar: with a few Drops of Sp.t Sal: Ammon: after, is of service by promoting a flow of Saliva & separation of the Sloughs.

The Skin is generally hot & Dry with anxiety, Delirium & restlessness &c. — in these Cases 'tis admirable to observe the effects of the Warm Bath to the extremities in abating these symptoms, by opening & relaxing the Skin, for as soon as the Skin becomes moist, all these Symptoms abate. — Therefore I frequently Foment the Feet in the progress of this Disorder: — to Warm Water I add about 1/9 part of Vinegar, which by its gentle Stimulus prevents the patient from catching Cold, and at the same time as a good Antiseptic.

The best Plan to be pursued

is that recommended in the Putrid Malig: Fever as those of the Decoct: Cort: Serpent: &c — and to keep up the Perspiration, which is an important object, the Sp. Mind: wth Julep e Camph: or Sp. Mind: in Infus: Contrayerv: & Serpent: answers well: — and this is a much better method than having recourse to the Bark early, for when the Skin is hot & Dry the Pulse quick &c, the Bark by blocking up the Secretions must heat & do hurt.

The Patients strength should be supported by Nourishment & Cordials — of which last Wine — or Wine Whey given in the form of Draughts is the best; but we should be careful to watch its effects, that it does not heat & produce other bad symptoms. — If it agrees well we may encrease it & give a considerable quantity; but it is best to dilute it with Water particularly for children — I would likewise recommend Chicken broth, Panada & Wine — and such like Demulcent nourishing substances.

In this Disease I have exper=
=ienced the good effects of a small Anodyne at night — for it promotes a Diaphoresis, & this it seems to do by checking all other Evacuations; for one secretion diminished the others are promoted, that thereby the balance in the Oeconomy of ye body may be preserved. — The Flea Bites to the

quantity of five or six Drops for Children — and more for adults generally answers & carefully procures rest.

Blister applied early around the Throat are very serviceable: — they abate Delirium & sense of soreness. — Sometimes they do not seem to be of any service till after are removed; — and this I have often observed in both this & in Pleuritic Disorders. — As the Parotid Glands often swell and the upper parts of the body become Oedematous — Clearly shew Nature's efforts to expel the Disorder upon the external parts; and this intention Blisters I think promotes: for whatever inflames the external parts, will remove the inflammation from parts more internal. — I never saw any of these Cases where Blisters did any harm for I never lost a Patient in the Hospital with a Sore throat.

As the Sloughs are sometimes very large & seem to threaten a Gangrene, then the Bark is serviceable: — but I always combine it with Acids, as Elix. Vitr.: which its heating & helps its Antiseptic qualities; as acids have a greater tendency to correct Putrefaction than the Bark, and always wait for a Remission.

Acidulated Drinks and the admission of cool Air is serviceable in these Disorders.

In case of profuse Hemorrhages from any part of the body — the Bark with Elixr. of Vitr: should be used.

When the Sloughs are large and Nature is incapable of seperating them — in these cases a little of the Mel Egyptiacum touched upon the part, by its slight stimulating property will produce a Seperation.

In case of Tension upon the Abdomen from Sloughs &c. here Emollient & Laxative Glysters as of Sugar, Milk & Manna &c are most useful.

But sometimes the Throat is Ulcerated without these Malignant symptoms, even in the inflam.y Species, specks are sometimes to be found.

Lecture 20th -

On the Peripneumony & Pleurisy.

The Pleurisy & Peripneumony should not be seperated — as one always accompanies the other — and the method of cure is nearly the same in both; — but first I shall speak of the Peripneumony. In this Disorder the Lungs

are principally ~~affected~~ inflamed and particularly the Pleura on their outer surface.

The Distinction, Symptomatic Writers have made between the inflammation seated in the Bronchial & Pulmonary arteries is well enough in Theory, — but as they cannot be known from each other in Practice, & require the same method of treatment, I shall pay no attention to this Distinction.

Symptoms

In this Disease there is a difficult and very hot Respiration; which last is not the attendant of either Pleurisy or Asthma: — there is a degree of sense of Weight or pressure rather than of pain upon the Breast — particularly about the Sternum; — for the Lungs are the most insensible part contained in the Cavity of the Body; they are chiefly without pain on the Inspiration.

The Pulse is soft and small. — But in the Pleurisy there is a difficulty of Respiration from Pain, — with a hard Pulse.

The Peripneumonic Pulse is oppressed and apt to deceive unless you are attentive, — but it ever rises upon Bleeding.

All membranous Inflammations are accomp.d with a hard Pulse, — but in Infl-

-ammations of Parenchymatous parts the Pulse are soft.

Fever and Chills always precede Inflammations upon the Lungs — and the general Febrile symptoms attend; there is an Elevation of the Scapula in Inspiration.

In the Pleurisy the most pain & uneasiness is seated in the Intercostals, which hindering Respiration, — the aid of extraordinary parts are called in.

Watchings in Peripneumony often terminate in Delirium, and are more dangerous than in common Fevers.

There is no regular termination of this Disorder: — the Inflammation generally tends to suppuration by the fourth Day. — When suppuration takes place there is a fresh Rigor and Chillness with Dyspnea, — and let the Patient lay in every posture there is no expectoration &c; but sometimes nature affords relief by expectoration of matter, yellowish & streaked with Blood: or the Vomica may break by Coughing and the Patient get well; but it is more common for an Empyema to take place from an Effusion of the matter into the Cavity of the Thorax. Patients frequently spit up Bags of

matter which are called Vomica :— if the Sacks burst and are not spit up, they are liable to fill again. When Patients are spitting up the Vomica they are frequently suffocated.

If no expectoration comes on after suppuration and if a Fluctuation is to be felt — these point out the collection of matter & point to the Operation.

From the Absorption of Matter a Hectic Fever is kept up — the Patient wastes away — and finally dies consumptive.

If the Patient expectorates a matter streaked with Blood on the fourth or fifth Day (it ought to be encouraged as the Expectoration gener.ly comes on at that time) and his Urine deposits a Sediment — tis favorable.

In elderly people the Hemorrhoids are very serviceable :— these are oftener Critical than any other discharge; perhaps upon their depend.g situation.

Upon dissecting those who have died of this Disorder the Lungs are found enlarged — livid Spots with Adhesions &c are met with; and a Gellatinous Fluid is found effused, & sometimes a Vomica in the Substance of the Lungs. A sanguinous temperament is

more subject to this Disorder in Cold dry Winters: – Men are more subject to it than Women, – and those subject to Hæmorrhages, most exposed to its attack. — Suppression of accustomed Evacuations as by Ulcers, Menses &c may occasion it.

There is frequently an Effusion of Blood into the Cells of the Lungs which renders them very dense: – if you cut a piece & throw it into Water, it will sink: – no other part of the Body is liable to such an effusion — Patients frequently spit up large quantities of that effused Coagulated Blood – and think it the substance of ye Lungs itself.

Pleurisy.

The Distinction of this Disease from the foregoing is not very necessary, as its treatment must be the same: – but its symptoms are a painful & difficult Respiration – violent pain in the side; – short troublesome Cough & high Feverish symptoms with full hard quick Pulse.

There are two other disorders called the one — the Peripneumonia Notha – and Bastard Pleurisy.

The Peripneumonia Notha, is a frequent disease peculiar to those of a Phlegm-

-atic Habit and the Aged: — tis known from the Cough — Difficult Respiration — Giddiness of ye Head from Coughing: sometimes there is a degree of Fever attending it & sometimes not: — sometimes the Pulse are slower than natural: there is not the Hot Respiration of ye Peripneumonia Vera: — the tongue is foul & there is frequent efforts to Vomitt; — but little Rigor succeeds: — there is great Prostration of Strength, & is properly the Disease of Age: — tis a Kind of Catarrhal Fever & is easily distinguished.

Bastard Pleurisy, is an Inflammation of the Intercostal Muscles: — there is often a redness of the parts and soreness to the Touch: — there is not so much cough or fever as in the Pleurisy Vera & the pain occupies a larger space or surface than that.

Hysteric Women are subject to a violent pain of the side — which is a mere flatulent affection of the Muscles, — & is best remedied by Friction; or some common Liniment will remedy it soon

But the true Pleurisy is easily distinguished. — An unfavourable circumstance is no expectoration, but when it does appear & is streaked with Blood, — suppuration very seldom follows: — but when the Cough with

Fever &c attend with no expectoration, — then suppuration is to be feared. — In the Perip: Vera — the Effusion is into the Cells of the Lungs — but the Bastard Pleurisy the effusion is into the Cavity of the Thorax.

The Cure of Peripneumony & Pleurisy depends upon the

free use of V.S. — they bear the second Bleeding better than the first: — never take small quantities.

In Pleurisy we should apply a Blister to the painful part; — but in Peripneumony the Blister should be applied along the course of the Sternum — as the Integuments are there the thinnest. — We should exhibit small doses of Antimonials.

In the Peripneum: Vera the small soft Pulse is more apt to decieve the inattentive observer than even an inflammation of the Intestines; — for in the last the Pulse is hard & small, — but in the Peripneum:y soft & small.

The Buff upon the Blood is no mark by which to regulate the Bleedings; — for this inflamm:y appearance of the Blood will sometimes attend in the last stage of a Consumption — & even when the Blood is evacuated to the last ℥IV in the Body. With regard to Bleeding — the Expect=

ation of a Crisis is the only circumstance, from Experience I think shews that we do not use the Lancet free enough in this Disorder: — nothing will relieve difficult Respiration with Fever so much as Bleeding. — This inflammation requires larger Bleeding than the inflammation of any part of the Body; for if we consider the amazing Velocity of the Blood through the Lungs even in an healthy state — what must it be when they are inflamed?

In the first Stage of an Inflammation of the Lungs where Resolution is the object — small doses of Nitre is a good Practice.

'Tis a common Observation that Purging gives less relief to the Lungs than to any other part of the body, — and these Disorders seldom go off critically by the Bowels: — But the Bowels shd. be kept soluble to prevent the Stimulus from the Faeces &c — the neutral Salts answr. best for this purpose.

Expectoration — upon which we mostly depend is best promoted if stopt, with small Doses of the Antimonials diluted in such a manner as not quite to occasion Vomiting, & given often; — or by heating the Spt. Mind. & suspending the Patients head over it so as to take in the Vapour. — The French use as a general remedy the Kermes Mineral; which is really a valuable Medicine &

next best to the Tart: Emetic — tis the best of Remedies both to promote Expectoration & Diaphoresis. — Squills in small Doses are likewise an excellent Medicine for the same intention. — The Seneka Decoction or Powder has been accounted a Specific in bringing on Expectoration when suppressed. — When the Powers of the body languish & the Expectoration is too little an Emetic will often restore the Expectoration and prove Critical: — but in the beginning of the Disorder small nauseating Doses are the best — Vomits are much better for promoting the Expectoration than the Sal. Vol: Corn: Cervi.

Blisters ~~are much~~ to the Breast about the Sternum are very serviceable & relieve the Respiration when difficult, much more than when applied between the Shoulders: — they don't act from their discharge but from their Stimulus.

In the last Stage the extremities become Anasarcous & Oedematous — and when the Antiphlogistic Plan is no longer proper; in these cases I have freely used a Decoct: of the Rad: Serp: Virg: with the greatest advantage: — tis not proper in the early stage, but at the time when nature wants a Stimulus.

The Steams of Warm Water drawn into the Mouth are very serviceable in promoting

the Expectoration: they act as a Fomentation; and all Fomentations promote a Resolution in all inflamatory disorders as of the Gout, Rheumatism &c. — In these disorders the inflamed parts may be fomented with much advantage: — the Warm Emollient Fomentation do not repel as is commonly supposed.

When the Inflamm.y stage is over & the Dyspnea & difficulty of breathing continues, then the Volatile and Ammoniacal Remedies are proper, but they are bad in the beginning of these Complaints.

There is the greatest absurdity in saying the suppuration begins upon the fourth Day; and thence to forbid Bleeding is one of the most dangerous precepts to inculcate to Students in Physic. — Every Bleeding protracts the suppuration, and whenever the symptoms require — you may Bleed. — But you very Case when the Patient is too low to Bleed not only with safety, but with advantage; — for tis the symptoms and not the time of a disorder, that we are to regulate our conduct by: but we should take care not to reduce the Patient too low.

The Patient should never be kept in a heat exceeding 60 Degrees of Farenheits Thermo-

-meter.

Peripneumonia Notha
or
Influenza

Sydenham has best described & treated this Disorder. — In very full Habits one Bleeding may be proper; but Purging & ~~Sweating~~ Vomitings are its cure; — as in the late Catarrhal Fever wherein much greater advantages arose from these Evacuations than from Bl.

When Peripneumonic complaints are general and depend upon the Season, — they do not then so well bear Bleeding. — Disorders depending upon latent & hidden Qualities of the Air — which cannot be investigated by any method we are yet acquainted with — are seldom of the inflam'd kind. — The Primae Viae seem to be their principal Seat; — and hence the great utility of Evacuations from them in these Disorders.

In the late Catarrhal Fever the Tart: Emetic with the Neutral Salts afforded the most relief. One small Bleeding is gener-

=ally sufficient in Epidemical Disorders. — In these the Buff is generally Gellatinous; as appears by the Observations of Huxham.

In the External Pleurisy — Blisters, Linimentum Volatile and gentle Diaphoretics as the Sp. Mindor: & Vin: Antim: are best.

People which use a Sedentary Life & indulge in Eating & Drinking are the most liable to this Disease, and express themselves as if choaked with Phlegm.

Lecture 21st

On Consumption.

This is a disorder in which the body is gradually wasted with a Hectic Fever — the Pulse are quicker than natural — the Patient has a violent cough — a difficult respiration on the least motion — and sometimes, not always, a purulent spitting from the substance of the Lungs.

This disorder generally begins like a Catarrh or Cold with an irritating dry obstinate Cough without Expectoration — with deposition upon the Lungs and an increased secr=

-ction of Mucus upon the Bronchial tube. — Obstructed Perspiration &c from Cold neglected — or other Cold taken upon the first, are frequently the Cause: — these complaints are not sufficiently attended to in the beginning. When a Cough continues with weight upon the breast — the Voice is affected with Hoarseness — and there is difficult respiration &c, accompd. with an increased secretion of Mucus in the morning; — it then generally terminates in a Consumption.

In this Disease we have two Exacerbations of the Fever in 24 hours, — the one about noon and the other about night: — and another is frequently after eating: — the Patient has frequent flushings in the Face, particularly in the Cheeks after Eating and in the Palms of the Hands. — The Pulse are quicker than natural: — Chills & heats are felt throughout the day — and a profuse sweat often attends towards morning. — Sometimes there is a dry cough without Expectoration; the cough is so violent as often to occasion Vomiting: — at other times the Expectoration is great at first — of Mucus — then purulent & fœtid and has a particular taste to the Patient sometimes sweet-

or saltish. — When the matter comes from an Ulcer in the Lungs 'tis generally yellowish & sinks in Water

In this Disorder there is sometimes unusual Chearfulness & the patient seems to think a Cure certain. — Towards the end there is mostly colliquative wasting sweats, which if we attempt to check, a Diarrhea generally follows; — and the reverse.

There are two other symptoms worth attending to in this Disorder; — the one is an unusual Cleanness of the Tongue, even greater than is observed in Health: — and the other a remarkable whiteness of the Tunica Conjunctiva of the Eye: — when these attend with a remarkable shrillness & squeaking of the Voice — the Disease is already formed & danger is to be expected.

Having thus described the general symptoms of consumptions — I shall now speak of the Different kinds of this Disease, of which there are five.

And first of that from the Tubercles in the Lungs suppurating successively; and not from large inflammations in the Lungs.

In this the body is emaciated a long while before there is any appearance of Purulency, — this seems to be of the Scrophulous kind

and is the most frequent in this Country, and seems to be hereditary:— in this the Skin is dry & hot & there is no spitting:— this is to be suspected when a cough continues many months and is always worst upon going to bed, and after eating:— This cough is often too long neglected from a supposition that it arises from nothing more "as tis called than a Cold & irritation upon the Trachea":— but the Violence of the Cough occasions tubercles, Dyspnœa, loss of Appetite dry tongue, thirst &c.— In the Event the Fever is more particularly violent:— in these there is the peculiar dead Whiteness of the Eye;— and the Vessels of the Tunica Conjunctiva disappear:— Anasarcous swellings come on in the Extremities, and towards the end colliquative Sweats, Diarrhea &c. which soon put an end to the Patient.— In these cases there is often no symptoms of Purulency to the very End:— upon Dissection, little Tubercles are found in the Lungs and along the Bronchial tube, which upon pressure are found to contain a small quantity of Purulent matter.

The Tubercle consumption is slow in its progress, and takes several seasons before it kills the Patient.

Another kind of Consumption different from the former: for there is a Cough & free spitting from the beginning.— The Matter

expectorated is at first insipid & afterwards Purulent with darting pains in the sides: — There is a fever towards the Even. — the Heat & Chills are more than in the Scrophulous kind: — the suppurations are larger & the Inflammations greater: — the Violence of ye Cough & the frequent Chills shew the suppurations; & the Lungs daily waste; — in some I have known even the Substance of the Lungs spit up without any considerable Hemorrhage.

The 3. Species is that arising from Hemoptoe: — this may proceed from a very narrow Chest, which resisting the Blood thro' the proper Canals, occasion it to force its way through the Ends of ye Vessels: — a bad conformation of the Head will occasion a Bleeding from the Nose: — upon the same principles those arising from a natural bad conformation of the Chest can only be palliated. — We should be particularly attentive in those at the proper age for Consumptions & Hemoptoe from the Lungs, (viz. about the 10 years) which are very common in this Country from variableness of Climate; in those, Hemorrhages from the Nose & Lungs are to be dreaded, and sh.d be relieved & guarded against by small & frequent Bleeding, & the most antiphlogistic Regimen that can be used.

Hemorrhages from the Lungs & then considerable — are not so bad as those which

are small; as they relieve themselves and are not so often productive of Consumptions:—in the large, the Hemorrhage will be checked from the quantity—but the small shew an ineffectual effort.

When Hemoptoe comes on, it shews a predisposition for consumption: then Patients should live low & use occasional Evacuations by V.S. &c.—Before the Hemoptoe comes on tis preceded ~~by~~ with heaviness about the Sternum, straitness &c., about the Lungs; by V.S. &c it may be prevented till a more advanced life shall render the Habit firmer & less liable to it. Consumptive Diseases are supposed peculiar to Youth—and if one may be allowed to mention the time—are more frequent between the Ages of 18 & 25,—but sometimes they come on after 30: & I have known them in Elderly people;—but then it has been those who have been much exposed to the Inclemency of the Weather as Cold & moisture, & have been hard working people: they are attended with a remarkable shrill Voice, purulent Expectoration & an emaciating Fever:—but their progress are generally less rapid than in the young & seem to require a different method of treatm:.

The Causes of Consumptions are generally an imprudent treatment or neglect of a Catarrhal cough: — all Scrophulous Habits are particularly subject to consumptions and require particular treatment at the particular time of Life: — a narrow Chest — with fine Skin — long Neck — light coloured Hair &c, which is generally attended with a lax fibre: — the unsettled state of the Climate, or sudden exposure from a hot Room to the cold which immediately stops Perspiration & determines that discharge more internally; which generally causes Catarrhs &c — Hemoptoe, Scrophulous habits &c.

If a person is subject to a Cough upon every exposure to Cold, — I would recommend a flannel covering to be worn next the Skin: — if this method was persisted in, we sh^d not have so many Consumptions

Cure

The greatest object in the Cure of Consumptions — is to promote the Resolution in Habits inflamation. — and this is best done in all Consumptions by small & repeated V.S. particularly in Scrophulous Habits. — Whenever Tubercles may inflame & suppurate three or four

ounces of Blood should be taken away every three or four Days. — I have known a Patient of this kind bled thirty times in three months, with great advantage. — The gradual Wasting generally prejudices people against Bleeding; but you will always find under the above circumstances that every Bleeding affords the Patient fresh strength & promotes Resolution. — If the Consumption is from Hæmoptoe — larger Bleedings may be necess.y to ℥x — but in the gradual Wasting of Scrophulous habits the small V.S. as ℥iij or ℥iv.

Another means of preventing suppuration is a Seton in the side: — this sh.d always be preferred early & urged strongly: — Open Blisters upon the part are not near so serviceable. — The Antients were very liberal in the use of Setons & often used five or six with advantage.

The Expectorating Oily Medicines as they are called, — pall & destroy the Appetite — and really hurt: — those of the Mucilaginous & Demulcent kind are much better than the Oily, which from their effects occasion Fever — and are hurtful eventually as gross Animal food; — they serve to keep up the Colliquative Diarrhea, which sh.d be carefully avoided: and on many other acc.ts they are very pernicious in these Disorders. — But there are some Dem-

-ulcent Pectorals that may be used with advantage; as the Mucilage of Gu: Arabic mixed with the Conserve of Hips & sweetened with a little Honey;— or Acids are found to be very serviceable.

The Oily Emulsion is but badly prepared in the common Way:— the best way is by adding Aq: font:^d ℨIV to ℥ij of Oil & then incorporate them with 10 or 15 Drops of Lixiv: Tart: — for the Sp^t. C.C. &c are much too mild to occasion a proper Mixture — and are too Stimulating when recieved into the Habit.

The Bals. Tolut:— Lucat: &c which were formerly much used — are now pretty generally laid aside in these Cases as they are found to heat & occasion Fever, & to be very hurtful:— however in Old Age & torpid Bodies where a Stimulus is wanted, they may be more serviceable.— D^r. Fothergill in his Paper upon them in the Medical Observations of London has given them their just Character.

In cure of Consumptions much depends upon the Air, Regimen & Exercise:— gentle Riding promotes a Resolution of the Tubercles, but short Journeys where the Patient is often interrupted & oblig'd to lie by on acc^t. of the Weather are rather hurtful than useful.— In these Cases long Journeys wherein the Patient will not be interrupted are the best; which, diverting the mind by the Chearful Objects will do great good.—

There is much in the softness of the Air if I may so term it; the Western Winds of this Country are the best:— It is now very fashionable & I believe reasonable to send Consumptive Patients to Devonshire & Scotland:— there is something in the Motion of the Ship and in the Sea-Air which is extremely beneficial; and in that particular sickness called Sea-Sickness, which we commonly imitate by small nauseating Doses of Antimonials— and which is particularly useful in promoting Expectoration & easing the Lungs.

More are cured by being sent to the Southern Latitudes than when kept here;— the Sea they pass seems to be very instrumental in producing the Salutary effects:— in those where the Hemoptoe stops & ~~that are~~ much emaciated they often recover by being sent to Madeira:— the moisture of the Sea Air &c is not nearly so hurtful as that of the Land.

The Regimen should be chiefly Milk —(especially whey) & Vegetables:— for Animal food increases the Fever & promotes suppuration.— Milk is good, but Butter-Milk appears to be admirable;— it cools & takes off the Feverish Heats— while at the same time it is very nutritious.

I have known some cured by living upon nothing but Cucumbers:— tis surprising that low Regimen will do in these Cases; —too little nourishments cannot be used; for the

Lungs bear the burthen of the Chyle, and as that is milder and smaller in quantity, - the better for them. These are the best methods of giving Radical Relief, - but much depends upon being able to palliate the Coughing; - for this purpose, Opiates are the best Remedy & do much less hurt than the constant Coughing; - which both irritates and lacerates the Lungs, - occasions inflamed parts to suppurate, and those that are well, to become inflamed. If there is no tendency to a Diarrhea the Vegetable Acids may be very serviceable in Consumptions: - as Lemon Juice &c - or in Want of these, Elixr. of Vitriol may be substituted.

But the Observations I have made upon the **Sarsaparilla** shew it to be a wonderfully useful remedy in these complaints: - it abates the Fever: - the Powder would do best, but it is too bulky a Medicine, - but the Decoction loaded with the Powder answers every purpose; if it is not nauseous &c.

In Scrophulous consumptions - Sea Water, with small doses of the Sal. Polychrest, as a Deobstruent & Neutral is very useful. - The Cicuta is sometimes good in the Scrophulous Species. - Bristol Water &c are recommended, - tis on account of the quantity of fixt Air they contain, which being the most subtle Acid, is more readily

carried to the Lungs — Pyrmont Water &c are recommended.

Hæmoptoe — is not so alarming in Women as in Men — especially if their Menses are obstructed.

When Colliquative Discharges come on checking them is but affording palliative relief: but it must be done. — If it is a Diarrhea — Opiates, if sweat — we must have recourse to Elixr. Vitr: — But sending the Patient to a warm Climate — small doses of the Antimonials particularly the Kermes Mineral, — Emetic's in small doses often promote the Expectoration and are of much service.

In Catarrhal Coughs after V.S. properly used — Emetic's are much more useful than the Warmer Sudorific's, which are too commonly employed.

Avoid the Volatile & oily Medicines in consumptive complaints: — it is better to give the Common Emulsion with Nitre &c. — The Oxymel Simplex with Barley Water is a good Medicine.

The Asthmatic Consumption of Elderly People.

It comes on when other Discharges cease and the redundant Humours are thrown upon the Lungs: — the Cough is obstinate, & often

continues long — the matter expectorated is firm & not reduced to matter as in Young People. — should be attempted to in time — as Setons — small Bleedings, Blisters &c will often obviate its Effects. — By the same method Cancers &c of Women might be prevented — when their Menses leave them.

The Dr. mentions the case of a Young delicate Gentleman, who laboured under a Scrophulous consumption, who from the use of Cicuta & quicksilver has in a very wonderful manner recovered. — He had all the distinguishing symptoms of a Scrophulous consumption: — was put upon a Milk & Vegetable Diet — removed to a good Air & took Exercise on Horse back.

He likewise says, he has observed the good effects of the Kermes Mineral & the Æth: Antim: with the Cicuta in the first Stages of this Disease. — But going to the West of England — using Sea Voyages, and going into Warm Climates, has very powerful Effect The Bark stops up Expectoration, the same as Opium produces Costiveness — and its use is forbid in Consumptive Cases.

Dr. Saunders approves of a Remedy recommended by Dr. Griffith of Colchester, — but would not give the Sal. Alkal. with the Sal. Martis at the same time, as the Sal. Alk: decomposes the

Sal. Martis renders the Medicine not so proper; —and the Alkaline Salt attracting the Vitriolic acid of Sal. Martis becomes a neutral.—

Lecture 22nd

On Inflammation of the Stomach & Intestines.

It is accompanied in general with an acute burning fixt Pain upon Pressure with continual Reachings &c — Tension — Fever — small quick and hard Pulse, which shd. always be attended to, as it often deceives & induces the use of Cordials, when Evacuations as V.S. would afford the greatest relief and raise the Pulse nearer a healthy standard. — Obstinate Costiveness in this and all other Inflammations of ye Viscera — as the Abdominal Muscles are too much pained to expel the Fæces.

Fever either precedes or follows the Inflammation: — if from Poisons &c then the Inflammation is first: — but if it is brought on from the Constitution, then the Fever is first, this is the best distinction (the Inflammation of ye Intestines may come on prior to any Rigor) in all Inflammations. — When acrimony gets

to the Eye — there is not time for ye Fever to arise before the Inflammation.

2d The Tongue in general is very dry but soon becomes brown, dark colour'd, and there is a considerable thirst.

When the Stomach is inflamed — there is a Vomiting and burning heat upon takg. anything into it; — the Pulse are hard & quicker than in inflammations of ye Intestines: — there is a pain upon pressure and the Patient is restless — Anxious & frequently Delirious. — But in Inflammations of the Bowels there is seldom any Delirium, and they end in without this symptom: — even in Gangrenes of the Intestines 'tis surprising the head is not affected.

In Inflammations of the Stomach & Intestines — the Urine is small in quantity or obstructed: — the same reason that prevents a discharge of ye Faeces — prevents the Urine. — In Inflammations of the Bladder, it retains the Urine to avoid the Pain that would attend its discharge. In Inflammations of the Stomach — there is frequent Vomiting — Hiccups — Eructations & if the patient is ~~not~~ but removed it will produce a sickness. — And in both this and that of ye Intestines, there is an early prostration, ~~[illegible]~~

of strength; which is indeed a principal symptom — In Cholics there is not that prostration, the Pain occupies a larger Space & is shifting; — neither is the Patient in continual pain but sometimes free.

If the Lancet is not liberally used and the secretions promoted before the 4th Day — this inflammation generally proves fatal —

There is a sunk, Hippocratic Death-like countenance — Cold sweats, — involuntary discharges of Urine, Faeces &c. and then Death.

Many very skilful Physicians are decieved by these Disorders, never suspect: them frequently till the Patient is opened & his Bowels found both inflamed & mortified; this is more especially the Case in the large Intestines.

Before Death there is much flatus & Tumor without pain — the painful period being now past; and when you are flattering yr self that yr Patient is much better — from the Pain &c abating, — he suddenly dies.

There is always much air pent up in the Cavity of the Bowels, — great adhesions — their Coats appear as if injected; there is a yellowish Mucus lines the Intestines — & many Gangrenous spots are to be seen upon their surface.

The Inflammation of ye Intestines is distinguished from that of the Stomach by the seat &c.

In the inflamed Stomach there is often the Hydrophobia; as every thing even the mildest of liquids when taken into ~~the~~ Stomach gives the greatest Pain. The Symptomatic Vomiting attendd. an inflamation of, or a stone in the Kidneys, is known by the situation of the Pain, and a flow of Urine relievs. the symptoms. — There is no prostration in Inflamations of the Kidneys — but great in that of the Stomach. — 'Tis distinguished from the Cholic by the pain moving & being Periodic in the last, — while in the Stomach it is constant & fixt: — in the Cholic there is not so much Fever, thirst or dryness of the Tongue, nor so much pain upon pressure.

When there is a Vomiting of Faeces & no stools, 'tis called an Illiac Passion: but this, a true Inflamation and must be treated according. Inflamations of ye Bowels turn more readily to Gangrene than inflamations in any other parts of ye Body.

When the Pulse are fluttering and intermitting they are relievd and raised by Bleeding. If the inflamation encreases, with Vomiting, little Urine Hippocratic Countenance, Hiccup, Black Tongue, involuntary discharges of the Faeces &c then Death may be more expected. Old Men are more subject to Inflam=

ations of the Intestines, and indeed to Inflammations of all other of the Abdominal Viscera – than the Young; and this seems to arise chiefly from the Defect of Perspiration in this advanced period. Children & Girls are not so subject to this Disease.

Cause

Wounds – sudden Colds – stimulating Purges that are not discharged from the body and occasion contractions &c. – Cold drinks taken when the Stomach is much heated, – sharp bodies in the Stomach – Iliac Passion; – incarcerated Hernia, Contractions of the Colon which prevent the Contents passing, and has been found to be the Case on Dissection; – in these Cases the Stimulating Purges are bad, the Oily are the best. – Dysenteries improperly checkt – Eruptions repelled – or the checking imprudently some other discharge. – The pulse is always small and hard in this Disease which are apt to Deceive.

Cure

V.S. – should first be used and its effects carefully watched – for if the Pulse rise, we are certain that the Evacuation is proper, when it should be repeated to four or five times in 24 hours: – The progress of this Disorder is so rapid that it should be repeated every few hours even

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to 40 in 24 hours. — In the Pleurisy you may wait awhile between the Bleedings, but in this disorder no time is to be lost, but the Lancet should be actively employed.

Stools should be procured at the same time: — the best and only proper Purge in these Cases is the Sal: Cathart: Amar: in Pepper Mint Water which checks the Vomit.g & is the best Vehicle in the most irritable state of ye Stomach: — ℥ij of the Salt sh.d be dissolved in a Quart of Pepper Mint Water, and ℥iv of it given every two or four hours till it operates: — or it may be given by the Pint. — This is much better than the Drastic Purges and ano.r better than when given in small quantities; — the more bulkey the better; & has ans.d when Scammony, Jalap & Calomel have failed.

Repeated Glysters should be used at the same time — they are a good fomentation: — they should be mild, not Purgative, that they may be retained the longer: — Warm Water is the best.

In Incarcerated Hernias — we should have recourse to the smoak of Tabacco thrown up Glysterwise. — We should use the Warm Bath, — and if the Patient should faint in it, so much the better, it will procure stools. — Fainting in all Inflammations except of the Lungs is very serviceable. — For this reason B.V. ad

Deliquium is good in all Inflammations except the Peripneumony;

In the Inflammation of the Intestines when great pain attends with Costiveness; Blisters to the Abdomen are very serviceable: we should mix with Blister Plaister some Cephalic Plaister, as four parts to one — which will prevent it from Blistering the Part; as we would rather wish to inflame than Blister it. — Sir Jn Pringle was the first who proposed Blisters in this Disorder: — We should use the Warm Bath while the Blister is on; but must trust more to active Evacuations. — We must not so soon omit the use of the Remedies but continue the Purging for two or three Days to cleanse & foment the Intestines, which is the next best method to us. —

When the Pulse & Stools are restored & Watchfulness remains, then we may use an Opiate; — but not till plentiful Evacuations have preceded;

Opiates joined with Cathartics will facilitate their passage thro the Intestines, and are often had recourse to East Indies.

Camphor & Nitre as recommended by Sylvester I do not now approve of — Experience having taught one to doubt the propriety of giving Camphor in this Disease: — a Spasm upon the Intestines & not an Intussusceptio.

Lexivium Tartari mixed with a little Chicken broth thrown in when Corrosive Sublimate has been taken will decompose it & save the Patient.

In that Fever which Women are liable to during the month, called Puerperal, we ought to have recourse to the Cathartic Salt dissolved in Aq: Menth: Piper: and give it in great quantities & likewise to a Plaister composed as before mentd.

The Iliac Passion —

Produces Inflammation, but sometimes not so soon — there is a Violent Pain in the Umbilical Region — Obstinate Costiveness, inanition & Flatulency; a Bilious Eruginous Vomiting, — after which the Faeces are thrown up and then Death closes the Scene.

The Obstruction is sometimes first in the Colon — then in the Ilium from Convolvulus — Adhesions are produced by Inflammation: — the Stools are obstinate, and the Peristaltic motion is invaded.

The Case is but little different from the Above: — the Intestines are not always inflamed — tho' very often: — We should endeavour to relieve the stricture with the smoak of Tabacco &c. from its penetrating quality. — When others have failed I have joined the Steams of Colocynth with

Tobacco with success.

But when inflammation attends we should be cautious of using these Stimulants but in these Cases trust to V.S., Fotus, Purging &c. as before directed. Quicksilver has been recommended, but I have seen its fatal effects in this House and do not approve of its use. — The direction of many of the Intestines prevents its action upon ye principle of action.

Drastic Purges are often used in obstructed Bowels as Calomel, Ext. Cathart: &c — but these are not so safe, for if they do not evacuate, they will inflame. — Therefore the Oily Bulky Purges are the best; for you should always soften ye Passage before you attempt to force it.

In all Cholics with violent Costiveness — without stopping to enquire the cause, I use the Sal: Cathart: Amar: — and in Hysterical Women I either add an Opiate with it or give after its Operation. The Tinct: Rhei &c are bad, upon these occasions Inflammation.

When the Sal. Cathart: has Operated freely — then we may use more comfortable and Warm Aromatics.

The Ol: Ricini is a good Medicine and I have no objection to it, but to its extreme nauseousness: — but after all the Sal. Cathart: Am:

is the best remedy in obstructed Bowels.

In the Medical Observations of Edinburgh, it has been recommended to let the patient stand upon a cold floor and throw upon him cold Water to promote the passage of the stools. —

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